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IN THE

Supreme Court of the United States

OCTOBER TERM, 1930

Original No. 11

IN EQUITY

THE STATE OF WASHINGTON, COMPLAINANT,

v.

THE STATE OF OREGON, DEFENDANT.

Defendant's Brief in Opposition to Motion to Strike Affirmative Defenses

I. H. VAN WINKLE,
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JAMES A. FEE
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IN THE

Supreme Court of the United States

OCTOBER TERM, 1930

Original No. 17

IN EQUITY

THE STATE OF WASHINGTON, COMPLAINANT,

v.

THE STATE OF OREGON, DEFENDANT.

Defendant's Brief in Opposition to Motion to Strike Affirmative Defenses

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STATEMENT

The state of Washington has filed a motion to strike certain portions of the answer filed by Oregon. Such a motion "cannot ordinarily take the place of or be used interchangeably with a demurrer." 49 C. J. 686, § 975.

"A motion to strike out a pleading as an entirety cannot be sustained where one or more of the counts, defenses, or paragraphs therein are sufficient. So a motion to strike a paragraph or count for irregularity should be denied if any portion of it is relevant or responsive." 49 C. J. 692 and 693, § 983 (4), and notes 55, 56 and 57 citing cases from 16 states and the U. S. courts.

Such is the direct holding of the U. S. C. C. A., ninth circuit, in the case of *Bunker Hill, Etc., Co. v. Polak*, 7 Fed. (2nd) 583, 585 (Certiorari denied 269 U. S. 581; 70 L. Ed. 423).

Washington's brief and motion are directed against certain portions of Oregon's answer which it is claimed set up the defenses of: First—Vested Rights; Second—Adverse Use; and Third—Estoppel.

THEORY OF THE CASE

The brief accompanying the motion is upon the theory that because the state of Washington is the complainant the rules governing the determination of the relative rights to the use of the water of the stream are essentially different from those which would apply if the case were between individuals.

I.

In a controversy between states as to the relative rights to the use of the waters of an interstate stream, the "Complainant State" brings its suit in its quasi-sovereign capacity as "parens patriae, trustee, guardian, or representative" of that portion of its citizens whose rights are affected.

Kansas v. Colorado, 206 U. S. 46, 99; 51 L. Ed. 956, 975.
North Dakota v. Minnesota, 263 U. S. 365, 375, 376; 68 L. Ed. 342, 346.
Krall v. United States, 79 Fed. 241.
Larsen v. Johnson et al., (Ariz.) 203 Pac. 874.

II.

In such a suit the rights of the state are "indissolubly linked with the rights of the appropriators" and "their situation and what has been accomplished by them cannot be ignored."

Wyoming v. Colorado, 259 U. S. 419, 468; 66 L. Ed. 999, 1015.

III.

In such a suit the rights of the appropriators must be determined as though the accident of the state line did not exist and all of the appropriations had been made in a single state.

Wyoming v. Colorado, 259 U. S. 419, 470, 471; 66 L. Ed. 999, 1016.

VESTED RIGHTS

We are taught by the case of *Wyoming v. Colorado* that the doctrine of appropriation must furnish the basis for the decision of this case.

The doctrine of appropriation recognized in both states (Complainant's Bill, page 11) is a doctrine of vested rights.

"To appropriate water means to take and divert a specific quantity thereof and put it to beneficial use in accordance with the laws of the state where such water is found, and, by so doing, to acquire under such laws, a vested right to take and divert from the same source, and to use and consume the same quantity of water annually forever, subject only to the right of prior appropriations."

Arizona v. California, 283 U. S. 423, 459; 75 L. Ed. 1154, 1168.

Oregon has alleged that she has done this, in the paragraph on page 23 of Oregon's answer, against which Washington has moved.

Since Washington has asked for the determination of the relative rights to the use of the waters in controversy, an allegation on the part of Oregon as to the existence of certain vested rights in her citizens is manifestly pertinent to the issues and goes to the merits of the controversy.

It is true that this allegation is followed by a statement to the effect that the bill filed by Washington is an attempt to deprive the owners of their property rights without due process of law and that neither the United States nor the state of Washington can do this.

Possibly this statement is a conclusion of the pleader.

If so, it does not render the entire paragraph subject to the motion to strike. The allegations as to the existence of the rights are pertinent. Under the rule as set forth at the beginning of this brief the motion must be denied if any part of the paragraph moved against is pertinent.

> "Ordinarily a pleading is not rendered wholly insufficient because it contains legal conclusions in addition to the facts which properly belong in it. In other words the addition of a conclusion of law which may be legitimately drawn from the facts pleaded will not invalidate the pleading. A conclusion of law at variance with, or unsupported by, the facts stated cannot be relied on, and must yield to the conflicting averments of fact. A statement of legal conclusions, together with the facts supporting them, con-

stitutes at most mere surplusage, and is not ground for demurrer, although the pleading is subject to a motion to make more definite and certain, or to strike out the conclusion of law."

49 C. J. 48 and 49, § 19(3), and cases cited in notes 27 to 34 citing cases from the United States courts and from almost every state in the Union.

This is directly held by the U. S. C. C. A., seventh circuit, in the case of *In Re Marion Mfg. Co.*, 1 Fed. (2nd) 903.

In the case at bar the conclusion of the pleader does not render the paragraph moved against insufficient, and because the paragraph contains pertinent allegations the motion as against this paragraph must fail.

ADVERSE USER

The authorities cited in the brief of the state of Washington under this head on pages 14 to 19 of the brief are not in point in a case in this Court between two sovereign states.

They have application only to a suit by a subject against a sovereign.

The distinction is pointed out by the Court in *Commissioners v. Buckner*, 48 Fed. 533, 536, where it is said:

"The states of this Union, as between each other, or as between them and the United States, are not excepted from acts of limitations as to bringing suits by the application of this maxim." (Nullum tempus occurrit regi.)

Furthermore, this Court has applied the doctrine of acquisition of title by prescription and adverse possession as against the sovereign states of this Union in the following cases:

Indiana v. Kentucky, 136 U. S. 479, 510 to 511; 34 L. Ed. 329, 333.

Maryland v. West Virginia, 217 U. S. 1, 41 to 43; 54 L. Ed. 645, 657 to 658.

Louisiana v. Mississippi, 202 U. S. 1, 53; 50 L. Ed. 913, 932.

These cases are decided not only on the basis of what the states had done but also what their citizens had done and the acts of the citizens were considered in determining the rights of the state.

As ruled in the case of *Wyoming v. Colorado*, supra, the rights of the state are "indissolubly linked with the rights of the appropriators." (259 U. S. 468, 66 L. Ed. 1015.)

It is alleged in the answer, page 27, that both the states of Oregon and Washington by statute and decisions recognize the same principles of law as to adverse possession, laches, and estoppel, and limitation of time within which real property may be recovered. For the purpose of this motion this allegation must be deemed admitted. Entirely aside from this technical admission the state of Washington has recognized that the right to the use of water may be acquired by prescription in the following cases:

Smith v. Nechanicky, 211 Pac. 880-882; 123 Wash. 8.
City of Raymond v. Willapa Power Co., 167 Pac. 914-916; 98 Wash. 317.
Allen v. Roseburg, 126 Pac. 900; 70 Wash. 422.
Berryman v. East Hoquiam, Boom & Logging Co., 124 Pac. 130; 68 Wash. 657.
Farwell v. Brisson, 119 Pac. 814, 66 Wash. 305.

The decisions of the Supreme Court of the state of Oregon also recognize this rule.

The same principles which led this court to hold in the case of *Wyoming v. Colorado*, supra, that the doctrine of appropriation should be applied to the dispute because recognized by the courts and statutes of both states would warrant the application to this case of the doctrine that water rights may be acquired by adverse possession and prescription.

That being true, if the citizens of the state of Oregon have acquired by prescription and adverse user the right to use any waters formerly claimed by the state of Washington, that right must of necessity be recognized by this Court in determining their relative rights.

In the case of *Wyoming v. Colorado*, this court recognized that the rights of the respective states to the use of the water of an interstate stream rested upon the right of the individual appropriators and that the right of these appropriators and what has been done and accomplished by them must be considered.

"These constituted the foundation of all rural home building and agricultural development. If they were re-

jected now the lands would return to their naturally arid condition, the efforts of the settlers and the expenditures of others would go for naught and values mounting into large figures would be lost." (259 U. S. 468, 66 L. Ed. 1015.)

It follows then that the allegations in that portion of page 25 to which the motion is directed and which are to the effect that the state of Oregon and its citizens "diverted, appropriated, and used under a claim of right and color of title pursuant to the laws of the state of Oregon and the recognized custom of appropriating waters from said stream in said territory at said time and applied to beneficial uses," certain quantities of water with certain priorities and that the appropriators had "taken, used, held, and carried away the said waters of said stream openly, notoriously, and adversely to the state of Washington, its citizens and all the world since the dates hereinbefore alleged" are allegations of the facts upon which the rights of the appropriators in Oregon depend.

It cannot be held that such an allegation is not pertinent to the issues nor can it be held that such is an allegation merely of adverse user. It is an allegation of the appropriation which must be the basis of the decision of the rights of the people of the state of Oregon. It is therefore pertinent to the matter in issue, and, under the authorities cited at the beginning of this brief, even if the words "openly, notoriously, and adversely" be taken as conclusions of the pleader, the motion could still not be allowed because of the allega-

tions of the pertinent fact included in the paragraph moved against. We do not think these words constitute conclusions. They are descriptive of the method of use and are allegations of the ultimate fact in that respect. What these citizens did is the basis of their rights and that of the state of Oregon. The dates of priority are important since under the doctrine of appropriation which is the basis of the decision in this case, this court has held "the cardinal rule of that doctrine is that priority of appropriation gives superiority of right." (259 U. S. 470, 66 L. Ed. 1015.)

ESTOPPEL

The complainant has moved to strike a portion of page 26 of the answer. This portion alleges in substance that the people of the state of Oregon have expended large amounts and constructed valuable works and improvements with the notice and knowledge of the state of Washington and its people and in reliance upon the appropriations of water made from this stream, and that neither the state of Washington nor its people ever protested against the diversion, appropriation, or use of the water, and that by reason of their conduct they are estopped from claiming any right in the waters or its use, or from interfering with the appropriations or diversions from this stream.

This paragraph alleges that these things were done during all of the dates alleged in the answer which is from 1864 down to date.

We thus have an allegation that the people of Oregon appropriated and used the water, went to great expense in reliance upon that use, developed large tracts of land and built homes, and roads, all upon the faith of the appropriations and with the actual knowledge of Washington and its citizens and that this continued without protest on the part of the state of Washington from 1864 down to the present time.

Under such circumstances the individual appropriators in Washington would be estopped. "Equity will not restrain the wrongful diversion of a stream when a land owner permitted the defendant to proceed with the erection of works and diversions of the water at very heavy expense, without taking any legal steps to prevent it for so long a period as seven years." (Farnham, Waters and Water Rights, Vol. 2, p. 1673, § 508.)

"The lower owner may lose the right to relief by permitting the upper owner to make large expenditures to effect the diversion of the water, under the belief that he is acting within his legal rights." (Farnham, Waters and Water Rights, Vol. 2, p. 1672, § 508.)

"Upon the question of silence operating as an estoppel, the authorities are not quite harmonious. The true rule, as we view the subject, is that unless the silence upon the part of the owner can be construed as a consent or at least an acquiescence, an estoppel will not be worked. Of course, if the silence is continued for the full period of the statute of limitations as a bar to an action for the recovery of real property, by the

laches of the owner, and the adverse possession and user of the one seeking a right, a prescriptive right may be acquired."

Kinney on Irrigation and Water Rights, 2d Ed., Vol. 2, p. 2037, § 1127.

Particularly is this true as to the claim of the state of Washington for injunctive relief.

The authorities cited by the state of Washington in their brief under this head are, like the authorities upon adverse possession, not in point. They apply only to cases between a subject and a sovereign and do not apply to cases brought in the United States courts between two states.

Under the case of *Wyoming v. Colorado*, supra, the measure of Washington's rights is the rights acquired by the citizens. If its citizens have lost their rights by an estoppel, Washington has correspondingly lost its right.

Furthermore, it will be observed that the case of *Wyoming v. Colorado* is decided partly upon a consideration as to what had been done by the diversion of water in the state of Colorado. It is therefore pertinent for the state of Oregon to allege what it is doing and what it has done by means of diversion of water in the state of Oregon. That being true, so much of the paragraph as refers to what has been accomplished by the use of the water is pertinent to the issue. Since a portion of the matter moved against is pertinent, the motion must fail as to this paragraph under the authority first cited in this brief.

The state of Washington, acting, as it is, to protect the rights of its citizens cannot escape the results of the conduct of those citizens in the past. It has a direct bearing and effect upon the extent of those citizens' rights.

That part of page 27 of the answer against which the motion is directed is an allegation that the states of Oregon and Washington both recognize in their statutes and decisions the same principles of law as to adverse possession, laches, estoppel, and limitation.

The case of *Wyoming v. Colorado*, supra, is authority for the proposition that where the two states both recognize the same doctrine by their statutes and their decisions the doctrine will be applied to controversies between the states. In so ruling the Court held: "Each of these states applies and enforces this rule in her own territory and it is the one to which intending appropriators would naturally turn for guidance. The principle on which it proceeds is not less applicable to interstate streams and controversies than to others. Both states pronounce the rule just and reasonable as applied to the natural conditions in that region." (259 U. S. 470, 66 L. Ed. 1015, 1016.) This reasoning applies with equal force to the paragraph of the pleading under discussion. Since both states recognize these rules, there is no reason why they should not be applied in these proceedings. They are the rules which have governed appropriations of water in the Western states since the doctrine of appropriation was first originated.

They are the rules which govern the rights of the individual appropriators in each state. They are the rules which govern all the appropriations made from this stream. It cannot be supposed that they would be applied in determining the relative rights of the Oregon appropriators and of the Washington appropriators in their respective states and that their application would then stop at the state line.

This controversy is essentially a proceeding to determine the relative rights between all of the appropriators from this stream. No different rules will be applied in determining such rights than if the appropriators were all in one state.

The state of Washington appears only for the protection of the rights of its citizens. There is no magic worked by the appearance of the state as complainant. The rights of the state depend upon the rights acquired or lost by its citizens. These rights must be determined under the laws and customs applicable and in force in the territory concerned.

Respectfully submitted,

I. H. VAN WINKLE,
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CHARLES Z. RANDALL,
GEORGE T. COCHRAN,
Special Counsel,

Counsel for Defendant.

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IN THE

SUPREME COURT

OF THE

UNITED STATES

NO. 11 ORIGINAL

OCTOBER TERM, 1932.

THE STATE OF WASHINGTON,
Complainant,

v.

THE STATE OF OREGON, *Defendant.*

RETURN TO RULE TO SHOW CAUSE

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IN THE

SUPREME COURT

OF THE

UNITED STATES

NO. 17 ORIGINAL
OCTOBER TERM, 1932.

THE STATE OF WASHINGTON,
Complainant,

v.

THE STATE OF OREGON, *Defendant.*

RETURN TO RULE TO SHOW CAUSE

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IN THE

SUPREME COURT

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UNITED STATES

NO. 17 ORIGINAL
OCTOBER TERM, 1932.

THE STATE OF WASHINGTON,
Complainant,
v.
THE STATE OF OREGON, *Defendant.*

RETURN TO RULE TO SHOW CAUSE

To the Honorable, the Supreme Court of the United States

The State of Washington, complainant in the above entitled suit, does hereby make return to the rule and order to show cause why the above entitled case should not be dismissed for want of prosecution and for cause why said case should not be dismissed and respectfully shows to the honorable court:

That the above entitled suit was instituted in good faith for the purpose of securing an adjudication of the rights to the use of the waters of the Walla Walla river, an interstate stream, between the state of Washington and its citizen users of the waters of

said stream and the state of Oregon and its citizen users of the waters of said stream on the other; that at the time of the commencement of said suit the dates of appropriation and priority of the users of the waters of such stream in the state of Washington and the amount to which each was entitled had been, as between themselves, adjudicated in the state of Washington by a decree of the superior court of Walla Walla county, Washington, and adjudication proceedings had been pending before the circuit court of the state of Oregon for Umatilla county for a determination of priorities and rights of the users of the waters of said stream in the state of Oregon, as between themselves, for more than a year and all the testimony relating thereto had been taken, and it was anticipated that very shortly after the institution of the present suit a decree determining such priorities and rights would be filed in the circuit court of Umatilla county, Oregon, in which such stream was located; that after consultation with the attorneys for the state of Oregon it was deemed advisable in the interest of economy and clearness to await the entry of such decree and thereupon stipulate such priorities and other matters as might be agreed upon; that contrary to expectations said circuit court did not enter its final decree adjudicating such water rights until the 16th day of May, 1932; that certain of the claimants to such waters, not being satisfied with such decree, appealed from the same to the supreme court of the state of Oregon, where said cause was not decided

until December 13, 1932 (*In re Waters of Walla Walla River,* see 16 Pac. (2d) 939).

That the taking of the testimony in the adjudication of the water rights in said stream in the state of Washington with certain tributaries occupied a period of three months, and the taking of the testimony in the adjudication of the water rights in said stream and its tributaries in the state of Oregon occupied a like or longer period, both due to the fact that the lands involved were in small tracts, making the number of claimants in each instance very large and the expense of taking such testimony very great; and it was felt by the attorneys for the state of Washington that, upon the entry of the decree in the Oregon court finally adjudicating the water rights in that state, it was probable that in a great portion of the cases the priorities between the users in the two states could be stipulated and the issues so narrowed as to eliminate a large portion of the expense and in the end an earlier determination of the present suit be reached, and this seemed to be concurred in by the attorneys for the state of Oregon; that the delay caused by the failure of the circuit court of Umatilla county, Oregon, to enter its decree and the taking of the appeal from such decree and the additional delay caused thereby were not anticipated since no appeal was taken from the decree of the superior court of Walla Walla county, Washington, adjudicating such waters; and it still is complainant's belief that the course pursued was the best suited to the situation;

that, in addition to the above situation, it seemed best to counsel for both states that additional studies be made for the purpose of determining the duty of water, the flow of seepage and such matters which might aid in a solution of the matter before the court, and both the state of Washington and the state of Oregon have, during the irrigating season of 1932, had studies made of these matters and such studies have been made by experts from the United States Department of Agriculture engaged in similar work in Washington and Oregon and loaned to the respective states for such purpose, together with other men familiar with such matters, such investigators working in cooperation with each other; that because of the other work in which the investigators for the state of Washington have been engaged, their reports were delayed and have just been received.

That notwithstanding the taking of the appeal to the supreme court of the state of Oregon from the decree of adjudication by the circuit court of Umatilla county, Oregon, counsel for the state of Washington were having their assistants check over the report of the state engineer of Oregon and the decree of said circuit court so as to be prepared as soon as possible after any decision in the supreme court of Oregon to take up with counsel for the state of Oregon the question of the stipulation hereinbefore referred to.

In addition, it was suggested by the state of Oregon that additional investigations and studies be

made over a period of years. This, however, after a thorough discussion and conference, was not agreed to and counsel for the state of Washington, deeming that a master should now be appointed, were preparing an application for such appointment which is filed with this answer.

That both states have expended considerable money in making the investigations hereinbefore described and in otherwise preparing for a trial of this cause, and the issues involved are of great importance to the two states concerned and their inhabitants and a dismissal would result in hardship and loss.

WHEREFORE, the complainant prays that the rule and order to show cause why said cause should not be dismissed be vacated and dissolved and that petitioner's application for the appointment of a master be considered and granted.

G. W. HAMILTON,
Attorney General,

JOHN C. HURSPOOL,
Assistant Attorney General,

FRED J. CUNNINGHAM,
Attorneys for Complainant,
State of Washington.

STATE OF WASHINGTON, }
County of Thurston. } ss.

G. W. HAMILTON, being duly sworn on his oath according to law, deposes and says: That he is the attorney general of the state of Washington and who, as such, at the direction and upon the request of the governor of said state, instituted the foregoing suit and makes the foregoing return to rule to show cause; that he has read the return and that the facts therein set forth, save and excepting where averred on information and belief, are true, and that as to the facts therein alleged as upon information and belief affiant is credibly informed and verily believes that the said facts are true.

G. W. HAMILTON

Subscribed in my presence and sworn to before me this 31st day of January, 1933.

JENNIE M. TATTERSALL,
Notary Public in and for the State of Washington, residing at Olympia.

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CHARLES ELMORE CR
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IN THE

SUPREME COURT

OF THE

UNITED STATES

OCTOBER TERM, 1930

NO. 17, ORIGINAL

//

THE STATE OF WASHINGTON,
Complainant,

v.

THE STATE OF OREGON,
Defendant.

REPORT OF THE SPECIAL MASTER

WILLIAM W. RAY,
Special Master.

ARROW PRESS, 62 W. SECOND SOUTH, SALT LAKE

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IN THE

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OCTOBER TERM, 1930—NO. 17, ORIGINAL

THE STATE OF WASHINGTON,
Complainant,
v.
THE STATE OF OREGON,
Defendant.

Submission of the Report of the Special Master.

In the cause entitled The State of Washington v. The State of Oregon, being No. 17 Original, October Term, 1930, this Honorable Court appointed me as Special Master by its order dated February 20, 1933, as follows:

> "The return of the complainant to the rule issued herein to show cause why this case should not be dismissed for the want of prosecution, is received and filed.
>
> "The motion for the appointment of a special master is granted, and it is ordered that William W. Ray, Esquire, of Salt Lake City, Utah, be, and he is hereby, appointed special master in this cause, with authority to summon witnesses, issue subpoenas, and to take such evidence as may be introduced and such as he may deem it necessary to call for. The master is directed to make findings of fact and conclusions of law, and to submit the same to this Court with all convenient speed, together with his recommendations for a decree. The findings, conclusions and recommendations of the master shall be subject to consideration, revision or approval by the Court. The master shall be allowed his actual expenses and a reasonable compensation for his services to be fixed hereafter by the Court. The allow-

ances to him, the compensation paid to his stenographic and clerical assistants, and the cost of printing his report shall be charged against and be borne by the parties in such proportions as the Court hereafter may direct. If the appointment herein made of a master is not accepted, or if the place becomes vacant during the recess of the Court, the Chief Justice shall have authority to make a new designation which shall have the same effect as if originally made by the Court herein."

Pursuant to the above order, and at the request of both parties, I heard the case on stipulations of fact and oral testimony. I held public hearings as follows:

Portland, Oregon, April 3, 1933.
Walla Walla, Washington, August 23 and 24, 1933.
Portland, Oregon, February 12, 1934.
Walla Walla, Washington, March 26, 27, 28, 29, 30, 31, April 2, 3, 4, 5 and 6, 1934;

at which hearings the parties appeared before me as Special Master by their respective counsel, presented their evidennce, consisting of 1195 pages and forty-seven exhibits, and thereafter submitted to me abstracts of the testimony and briefs with respect to findings of fact, conclusions of law and recommendations for a decree which they respectively desired made in the case.

Pursuant to the above order of this court, I have reported the testimony and the exhibits received by me as Special Master by the filing of the same in the office of the Clerk of this Court, with my certificate; and I hereby submit to the Court my findings of fact, conclusions of law and recommendations for a decree.

Respectfully submitted,

WILLIAM W. RAY,
Special Master.

IN THE

SUPREME COURT

OF THE

UNITED STATES

OCTOBER TERM, 1930
NO. 17, ORIGINAL

THE STATE OF WASHINGTON,
Complainant,

v.

THE STATE OF OREGON,
Defendant.

REPORT OF THE SPECIAL MASTER

THE PLEADINGS

The State of Washington, on July 22, 1931, filed, with leave of court, its bill of complaint in the Supreme Court of the United States. In response to process duly served, the State of Oregon, October 5, 1931, filed its answer to said bill of complaint, to which answer a reply was filed May 2, 1932.

The purpose of the suit, as disclosed by the allegations of the complaint, and the relief sought, is to have this court determine the relative rights of the states of Washington and Oregon to the use of the waters of the Walla Walla River and its tributaries, a non-navigable interstate stream flowing

within both states, and to enjoin the State of Oregon from continued interference with the rights of the State of Washington.

Bill of Complaint.

The bill of complaint alleges that the Walla Walla River is a non-navigable stream rising in the Blue Mountains in the Northeastern corner of Umatilla County, State of Oregon, and flowing thence northwesterly about thirty miles within the State of Oregon to the Washington-Oregon line, and thence northwesterly for a distance of about thirty miles within the State of Washington to its juncture with the Columbia River; that the first twelve or fifteen miles of the river is through a narrow canyon with no irrigable lands adjacent to the stream; that the remainder of the river in Oregon is bordered with irrigable lands; that the stream divides into several designated branches within the State of Oregon, which branches are the recipients of the waters arising in small streams and springs adjacent to such branches; that it is necessary to the production of successful crops that the lands along the stream be irrigated; that a like condition obtains as to much of the land along the stream in Washington; that certain soils available to irrigation from the river will produce abundantly when irrigated; that the waters of the Walla Walla River come from springs and from the melting of snow and the rainfall in the Blue Mountains; that after about June first of each year, because of the melting of the snow and the want of sufficient rainfall, the flow of the river is dependent upon springs; that as a result the amount of stream flow in late July and August is much less than during the earlier months; that the stream flow is variable from year to year, but that in normal years the early spring flow is about 400 cubic feet

per second of time and in late July and August about 150 cubic feet per second; that due to drought prevailing during the past eight or ten years the stream flow has been only about two-thirds of the normal amount; that the lands riparian to the Walla Walla River both in Oregon and Washington were settled and segregated from the public domain mostly prior to 1870, but that the cultivation of land prior to 1870 was largely confined to sub-irrigated lands lying along the banks of the stream; that about 1870 there commenced the use of water upon lands along the river which required irrigation, and that such use gradually increased until in 1892 there were so irrigated in Oregon about 1200 acres of land and about 8500 acres of land in Washington; that of the 8500 acres of land being farmed in Washington at least 7000 acres were of such character and so situated that they required irrigation for the production of crops; that in 1892 the irrigated areas had so increased that it required all of the flow of the Walla Walla River and its tributaries during the late summer months to properly irrigate such lands; that the 7000 acres of land in the State of Washington are in a high state of cultivation devoted to the growing of fruits, alfalfa and other crops, and furnish homes for more than one thousand people and have a value, except for the fact that they are deprived of water by the wrongful acts of the State of Oregon, in excess of $20,000; that since 1892, and particularly since 1920, additional lands have been put under irrigation in the State of Oregon, which lands have drawn water from the flow of the Walla Walla River during the low water season; that said new lands put under irrigation in Oregon have been located at greater distances from the stream where the topography of the country is such that the waste and seepage water no longer returns to the stream; that the flood waters occurring

in the early spring are now diverted for the irrigation of large areas of land in the State of Oregon under appropriations subsequent to the Washington appropriations and that the appropriators of flood waters extend their use of waters of said stream beyond and after the flood water period, thereby depriving the State of Washington of water to which it is entitled and lowering the ground water table and destroying the sub-irrigation of land in the State of Washington; that such diversions and uses have been made under permits from the State of Oregon and that the State Engineer of the State of Oregon threatens to and will continue to issue further permits and license further wrongful diversion of the waters of said river within the State of Oregon; that in addition thereto the State of Oregon has fixed and permitted an excessive duty of water in disregard of the rights of the users of water in the State of Washington, which excessive use deprives the water users in the State of Washington of water to which they are entitled; that thereby the water users in the State of Washington have been and are being deprived of sufficient water to properly irrigate their lands and are unable to successfully grow crops, and that unless the wrongful conduct of the State of Oregon shall be restrained, lands in the State of Washington will be rendered wholly unproductive, to the great and irreparable injury of the State and its land owners; that the State of Washington and the State of Oregon each by their statutes and the decisions of their courts recognize the doctrine of riparian rights, so that the owner of land riparian to a stream is entitled to his proportionate share of the waters of such stream for the purpose of irrigation, subject to the requirement that such riparian user shall beneficially apply such water within a reasonable time; that each of said states further recognizes the doctrine of appropriation whereby

the first appropriator in time is first in right, subject only to vested riparian rights; that the amount of the appropriation is fixed as of the time when the work necessary to put the water so appropriated to a beneficial use is initiated, accompanied with due diligence; that the more recent developments in Oregon have been on non-riparian lands; that the State Engineer of the State of Oregon is empowered to supervise the appropriation and distribution of waters within such state, and that the State of Washingon has requested of said State Engineer an equitable division of the waters of said stream, which request has been denied; that unless restrained the State of Oregon will continue the wrongs above set forth until all of the waters of the Walla Walla River are diverted and the citizens of the State of Washington deprived thereof during the irrigation season. The State of Washington offers to do complete equity in the premises and alleges that it has no adequate remedy at law and no remedy in any court except the Supreme Court of the United States. The State of Washington asks that this court exercise its sole jurisdiction over the determination of the respective rights of the States of Washington and Oregon and their citizens to the use of the waters of the Walla Walla River and its tributaries in said states, and that the State of Oregon be enjoined and restrained from diverting from the Walla Wallar River any of the waters of said streams to which the State of Washington and its citizens are found to be entitled.

Answer.

The answer filed by the State of Oregon admits the allegations of the bill as to the sources and the course of the Walla Walla River, but denies some of the allegations

of the Washington complaint as to the dividing of the river into branches in its course. The defendant admits that after the stream separates at Milton, Oregon, it flows in a wide valley and that several springs and small streams arise in the valley, which springs and streams naturally flow into and join the main branches of the river either before or after they pass into the State of Washington, but alleges that the amount of flow from such source during the summer and irrigation season of each year is limited. Defendant admits the necessity of irrigation to the successful growing of fruit, alfalfa and vegetables within the State of Oregon and admits that along certain parts of the river in Washington irrigation is necessary to the production of crops.

The answer then proceeds to set forth in detail the areas in Oregon along the river which require irrigation, the amount so required and the reasons for such water requirement; admits that the waters of the Walla Walla River come from springs, from melting of the snow and the rainfall in the Blue Mountains in which it rises, but alleges that after about the first of June of each year little of said flow comes from melting snow or rainfall directly; alleges that the springs contributing to said river gradually decrease in flow, so that ordinarily the flow of the stream in the latter part of July and during August of each year is greatly diminished in volume as compared with the flow during earlier months; that said stream varies from year to year and that in normal years the flow in the early spring is about 400 cubic feet per second, but the defendant denies that in the later part of the irrigation season the normal flow is 150 cubic feet per second or thereabouts or that during the past eight or ten years it has been any amount in excess of 80 cubic feet per second. Defendant admits that during the last eight or ten years the flow of the river

has been decreasing, but denies that it is only two-thirds of the normal flow. Defendant admits that the lands riparian to the Walla Walla River both in the States of Oregon and Washington were settled mostly prior to 1870, but denies that the cultivation of lands along the banks of the stream was limited largely to comparatively narrow strips of sub-irrigated land, or that the existence of such sub-irrigated lands was the cause of early settlement. Defendant alleges that during and prior to 1870 there had been diverted and appropriated from said stream system by means of ditches, dams and headgates for stock, domestic, irrigation and power purposes about 19 cubic feet per second of water, which water had been applied to the irrigation of about 700 acres of land and to power purposes, which waters so appropriated are still beneficially used within the State of Oregon. Defendant admits that since 1870 such uses have gradually increased. Defendant denies that about the year 1892 there were irrigated from said stream system in the State of Oregon only 1200 acres of land and alleges that on said date not less than 5831 acres of land were irrigated in Umatilla County, Oregon, from the waters of said stream and its tributaries. The defendant denies that 8500 acres of land were irrigated or were using water for the production of crops within the State of Washington at the end of the year 1892, or that there was any larger acreage irrigated from said stream or its tributaries than 6167.69 acres. The defendant alleges that of said 6167.69 acres irrigated in Washington during 1892, 3,024 acres lay along the Walla Walla River, the East and West branches of the Little Walla Walla, along Mud and Pine Creeks, and that said lands are principally sub-irrigated from the waters of said stream; the defendant further alleges that no part of said 7000 acres in the arid belt within the State of Washington was placed

under irrigation until the year 1898, when 80 acres were irrigated, and that thereafter the reduction of said lands to cultivation was slow, small in amount, and that in the year 1907 only about 1500 acres were irrigated; that in the year 1908 or 1909, because of shortage of water for the irrigation of said lands, a contract was entered into with the City of Walla Walla for the use of sewage water from the City of Walla Walla upon said lands, and that a pipe-line was constructed four and one-half miles in length with a carrying capacity of sixteen cubic feet per second for the utilization of said sewage water, and that thereby said sewage water was made available for the use of Washington irrigators in the year 1912. The defendant admits that the 7000 acres of land lying in the arid belt in the State of Washington along the Walla Walla River will not produce crops without irrigation, but denies that any of said lands required water in the year 1892 or that the same were irrigated at that time. Defendant denies that said 7000 acres, or any acreage in excess of 5,000 is in a high state of cultivation or devoted to the growing of crops or the furnishing of homes for any number of people in excess of 600, or that the same is worth a sum in excess of $20,000, or any other sum; admits that since 1892 there have been additional lands put under irrigation in the State of Oregon and that more of the full flow of said stream, during the summer months, has been taken therefrom and used upon said lands; defendant denies that said increase has been more particularly since 1920 or that said lands brought under irrigation have been further away from the banks of the stream or that the topography of the country is such that waste and seepage water does not return to the stream as was the case with earlier appropriations; denies that flood or excess waters of the stream in the early spring have

been appropriated for the irrigation of large areas of land in Oregon or that said appropriations so made are subsequent to Washington appropriations or that said appropriators of flood waters have increased from time to time their appropriations in disregard of the rights of Washington users or extended their use of flood waters beyond and after the recession of the flood waters to the detriment of Washington users, or that any such use has lowered the water table along the stream and destroyed the sub-irrigation of Washington lands; admits that diversions from the stream have been made under permits issued by the State Engineer of Oregon and alleges that since the year 1909 said permits have been granted under the general law of the State of Oregon; denies that the State of Oregon has in the past issued, or threatens in the future to issue permits for the wrongful use of the waters of Walla Walla River or that the State Engineer has fixed the duty of water at an excessive amount without consideration of the rights of Washington users or that any use in Oregon has deprived the Washington users of water to which they are entitled; denies that by reason of use in Oregon, Washington appropriators have been or are being deprived of sufficient water to irrigate their lands or are unable to successfully grow crops on their lands or that their crops and orchards are being destroyed or will be rendered wholly or at all unproductive.

The State of Oregon by way of defense, alleges that in the past the State of Washington and its users have from year to year increased their irrigated acreage without regard to the rights of prior appropriators and have unreasonably and excessively increased the amount of water taken from the stream and its tributaries, and are themselves thereby causing loss and injury to the irrigators in Washington if said irrigators are suffering because of an

insufficient water supply; that Walla Walla County, Washington, and that part thereof in which the Walla Walla River, Mill, Yellowhawk, Garrison, Titus, Cottonwood, Blue, Reser, Russell, Pine, Mud, Little Mud, Done and Stone Creeks lie, is in the same water shed as the Walla Walla River, the Tum-a-lum River and the tributaries of said Walla Walla River and said Tum-a-lum River on the Oregon side of the state line; that all of said streams in Walla Walla County are tributaries of the Walla Walla River; that Walla Walla is a municipal corporation having a population of fifteen to twenty thousand; that said city appropriates and uses for municipal purposes from Mill Creek, which stream arises in the State of Oregon and is the principal tributary of the Walla Walla River in the State of Washington, from 22 to 28 cubic second feet of water; that said water is completely consumed by said city for municipal purposes; that since the year 1919 and up to 1926, there has been appropriated and used in Walla Walla County, Washington, from the above named streams, water for the irrigation of 3490.76 acres of land and that during said period of time only 1573.98 acres of land within the State of Oregon have been placed under irrigation from the waters of the Walla Walla River and its Oregon tributaries; that the State of Washington, through its agencies, has permitted and allowed excessive use of waters upon Washington lands; that between 1919 and 1926, said state permitted and allowed the use of one cubic second foot of water from April 1st to July 1st for the irrigation of each 75 acres of land; one cubic second foot of water to each 100 acres of land from July 1st to October 1st of each year, and from October 1st to April 1st of each year one cubic foot of water per second to each 50 acres of land; that during the same period Washington irrigators have increased their use from said streams natur-

ally tributary to the Walla Walla River to a greater extent than Oregon irrigators have increased their use from the Oregon tributaries; that the State Engineer of the State of Oregon has established a duty of water of one-half inch to the acre for the irrigation season in said territory and has made all permits granted since 1909 for the use upon lands irrigated under Oregon permits subject to all prior existing rights; that in the year 1926 there were more acres irrigated in Walla Walla County, Washington, than in Umatilla County, Oregon, from the Walla Walla River and its tributaries; that in the State of Washington during said year there were 25,269 acres under irrigation; that 23,271 acres were farmed and irrigated while 2,018 acres were under existing ditches in various stages of development, and that the duty of water fixed by the State of Washington was applied to the lands so irrigated; that during the same year the State of Oregon had but 18,269 acres under irrigation from the Walla Walla River and its tributaries; that about 1904, there was commenced the development of the Attalia project in Walla Walla County, Washington, consisting of about 2400 acres; that in 1926 the flume carrying water to said Attalia lands was destroyed and part of the dam diverting said water was washed away; that neither said flume nor said dam has ever been replaced, and that since 1926, only about 100 acres of said land has been irrigated, and that the water appropriated for said use is now flowing unused into the Columbia River and that about 20 second feet of water flows in the Touchet River above said Attalia project and is not being put to a beneficial use. Defendant admits that the states of Washington and Oregon each recognize by their statutes and court decisions the existence of the doctrine of riparian rights prior to 1909, but denies that the owner of land riparian to a stream in Oregon

is entitled to his proportionate share of the waters flowing in such stream for the purpose of irrigation or subject to any such requirements as that such riparian use be perfected within a reasonable time or limiting such riparian right to such beneficial use or together with the doctrine of appropriation whereby the first appropriator in time is first in right, subject only to previously acquired riparian rights, or that the amount of the appropriation is to be dated as of the time when the work was instituted for the putting of the water to a beneficial use by the exercise of due diligence.

The state of Oregon, by way of further defense alleges that in the year 1909 a statute was passed by Oregon providing a system for the regulation, control and distribution and use of waters of the state and providing that, subject to existing rights, all waters within the state of Oregon may be appropriated for beneficial use and that any person intending to acquire the right to the use of any water shall, before commencing the construction of any ditch or other works, make application to the State Engineer for a permit to make such appropriation; application of water to a beneficial use prior to the passage of the act or under authority of a riparian proprietor shall create in such riparian proprietor a vested right to the extent of the water beneficially used; that since the passage of the act of 1909 the highest court of Oregon has decided that "a settler upon a non-navigable stream has an election, either to rely upon his right as a riparian proprietor or to make an appropriation of the water, if it is subject to appropriation, and claim as an appropriator" and "the right of appropriation is incompatible with the rule of riparian proprietorship. The doctrine of appropriation excludes the idea of equality and makes each water right superior to all others subsequently initiated

. . . while the characterizing feature of riparian ownership, when applied to irrigation, is equality or, perhaps to speak more exactly, the right of each person is correlated with the right of every other person, although a riparian owner may take all of the water in a stream if needed to satisfy domestic wants;" that ever since such decision was made, the rules there announced have been and are the law of Oregon; that said act further provides that where any riparian proprietor, at the date of the passage of the act, was engaged in good faith in construction of works for the application of water to beneficial use, the doctrine of relation may be applied. Defendant denies that the Oregon lands to which waters have been appropriated in recent years have been non-riparian lands or lands which have lost their riparian rights by failure to irrigate the same within a reasonable time. Defendant denies that a request has been made upon Oregon for the equitable division of the waters of the River or any division except a division dictated by the State of Washington, and denies that Oregon has failed to recognize the rights of the State of Washington and alleges that the State of Oregon permits all and more water than that to which the State of Washington is entitled to flow across the line between said two states without interference, but that the State of Washington is permitting said water to be wasted; denies that unless restrained by this honorable court, the State of Oregon will continue to use or divert the water of the Walla Walla River to which the citizens of the State of Washington are entitled.

Oregon alleges that more than twenty years before the commencement of this suit the courts of the State of Oregon adjudicated and determined the rights of the Oregon users, and that the rights so fixed have been continuously since used and are valuable property rights that have become

vested under the laws of Oregon and the United States; that in the year 1888, 2250 inches of the water of said stream, measured under a six-inch pressure, miner's measurement, were appropriated for power purposes, and in 1898, 500 additional inches so measured were appropriated for power purposes, and that other amounts of water were appropriated from said stream at various times both before and after said dates for power and irrigation uses, all of which waters were diverted from the channel of the Walla Walla River and from the Tum-a-lum River and used for power and irrigation purposes in a direction northwesterly from said point of diversion and that all of said waters were diverted into the Little Walla Walla River and thereafter flowed and still flow in a northwesterly direction away from the main stream. The defendant further alleges that in the early days the Tum-a-lum River carried the main flow of the waters of the Walla Walla River, but that for about forty years or more past said Tum-a-lum River has been absolutely dry during the summer and irrigation season of each year from a point about four miles above the state line to a point about two miles above said state line, but that water reappears in said stream about two miles above the state line in Oregon and flows therefrom into Washington, and that from the point of reappearance of said stream it is fed by many springs, seeps and marshes; that the State of Oregon and its people diverted, appropriated and used in good faith under claim of right and color of title and pursuant to the laws of the State of Oregon and the recognized custom of appropriating water from streams in said territory, and applied to a beneficial use, from about the year 1864 to 1893, water from said river and its tributaries for the irrigation of 5,831 acres of land and about 4,000 miner's inches measured under a six-inch pressure for

power purposes, and have since held and used said water for said purposes and from 1892 to 1909, appropriated and used water for the irrigation of 6712.73 acres, and from 1908 to 1921, appropriated and used water for the irrigation of 3,042.82 acres, and from 1927 to the present have appropriated and used water for the irrigation of 1,573.78 acres; said appropriators have taken, used, held and carried away said waters from said stream openly, notoriously and adversely to the State of Washington; that during the times mentioned above, the State of Oregon and its people have built dams, headgates, main and lateral ditches, leveled and cultivated lands, planted orchards, vineyards, pastures, lawns, meadows, alfalfa fields, ornamental and shade trees, and built and established homes upon said lands, constructed roads and highways, expended enormous sums of money, and during all of said time the State of Washington and its people had notice and knowledge of said developments and that neither the State of Washington nor its people have ever protested against the diversions, appropriations or use of waters of said stream as enumerated, and are thereby estopped from claiming or asserting any damages, or claiming any right or interest in or to the waters of said stream so appropriated, or from interfering with said appropriations and diversions; that both states recognize by their statutes and the decisions of their courts the same principles of law as to adverse possession, laches, estoppel and limitation of time within which real property may be recovered. Oregon prays that the said suit may be dismissed.

Reply.

Washington by its reply admits the allegations of Oregon's answer to the effect that during the summer, or irrigation season of the year, no water is discharged into

the Walla Walla River from the east or west branches of the Crocket or from the Ford Branch so far as the present time is concerned, and alleges that by means of dams and other controlling works, water has been in recent years diverted in the State of Oregon from the main stream into the Little Walla Walla River and into the various branches thereof and other drainage channels and into irrigation ditches in that locality, and the water has thus been prevented from returning to the main channel of the Walla Walla River in the State of Washington above the principal diversions of said Walla Walla River within the State of Washington. Washington denies the allegations on page 8 of Oregon's answer that 700 acres of land had been irrigated in the State of Oregon prior to 1870 and alleges that the amount so irrigated was approximately 70 acres. Washington denies that in 1892 there were under irrigation 5,831 acres of land in Umatilla County, Oregon, taking water from the Walla Walla River, and alleges that said acreage did not exceed 1200: Washington admits the construction of a pipeline for a distance of 4½ miles from the City of Walla Walla for the carriage of sewage water, but denies that any quantity of sewage water in excess of five cubic feet per second was ever carried in such pipeline. The reply admits that between 1919 and 1926 an undefined acreage has been placed under irrigation in the State of Washington, but alleges that the larger portion of such lands were not irrigated from the Walla Walla River or its Oregon tributaries or from waters which could be used in the State of Oregon, but that such lands were irrigated from the tributaries of the Walla Walla River and the Walla Walla River within the State of Washington. It is further alleged that in the year 1926 only approximately 6,000 acres of Washington land received water from the Walla Walla River and

its tributaries, during the summer irrigation season; that the balance of the lands irrigated in the State of Washington as set forth in the Oregon answer, (pages 17 and 18) having rights of late priority, receive water only intermittently during the winter and spring run-off. Replying to the allegations of defendant on page 18 of its answer as to the number of acres of land irrigated in Walla Walla County, Washington, from the Walla Walla River and its tributaries, complainant alleges that of the lands so alleged by defendant to be irrigated in said County, not to exceed 11,000 acres are irrigated from the Walla Walla River or its tributaries, or from waters which are or can be used for irrigation in the State of Oregon, and of those so irrigated a considerable portion are irrigated only during the non-irrigating season, when the waters would otherwise be wasted. It is alleged that all of the water in the Walla Walla River at or below the mouth of the Touchet River is return and seepage water which had been put to a beneficial use, and that no part of said water can be used for irrigation of lands in the State of Oregon or the State of Washington. Complainant admits that the amounts of water diverted from the Walla Walla River and from the Tum-a-lum River for power and irrigation purposes have been discharged into the Little Walla Walla River as alleged on page 24 of defendant's answer, but the complainant denies that said waters so diverted flowed and still continued to flow away from the main stream in a northwesterly direction from a point just below the forks of the Tum-a-lum and Little Walla Walla Rivers, and alleges that such waters have reached and unless wrongfully diverted will reach the main stream of the Walla Walla River above the principal Washington diversions. It is further admitted in the reply that during the last ten years at short intervals the citizens of Oregon have diverted all

of the waters of the Walla Walla River above the Tum-a-lum section, the period of diversion varying according to the season, but alleges that during the past forty years or more, at no time has the whole supply of said section of the Walla Walla River been diverted during the entire summer and irrigation season.

The reply makes appropriate denial of all of the affirmative defensive matters set forth in the answer of the State of Oregon except as qualified above.

STIPULATIONS.

The parties hereto, after the filing of the complaint, the answer and the reply, entered into a series of stipulations, eleven in number, which stipulations embody agreements of the parties as to facts material to the issues involved. These stipulations have very materially limited the record in this case and have obviated the taking of testimony upon all issues as to which the parties were able, after diligent effort, to come to an accord.

A summary of these stipulations is as follows:

STIPULATION NO. 1

The decrees of the courts of the states of Washington and Oregon and the abstract of water permits of the State Engineer of the State of Oregon and the abstract of water permits issued by the State Supervisor of Hydraulics of the State of Washington are admissible in evidence as fixing the relative individual rights of the parties named therein and their successors in interest to the use of water, in the amounts, for the purposes and at the places or on the lands set forth in said respective permits and in said respective decrees; with the provision that the admission

of these decrees and permits shall not be construed as or held to be an admission, waiver, abridgment or modification of the rights of either state as against the other relative to the right claimed by the city of Walla Walla, Attalia Irrigation District, Touchet River, Mud and Pine Creeks, and that said stipulation shall not be a waiver of the claims of the State of Oregon upon the ground of adverse use and estoppel, and the distribution of water in Oregon as a separate stream system.

STIPULATION NO. 2.

Paragraph 1 of this stipulation is an agreed statement as to the stream system in the two states and is as follows:

> "The Walla Walla River rises in the western slopes of the Blue Mountains in Northeastern Oregon. Two branches, called the North Fork and the South Fork, unite about four miles above the city of Milton. From this point the river flows through a narrow irrigated valley, approximately one-half mile wide, until it reaches Milton, where the river divides in a delta formation. The pipe line of the city of Milton diverts water from the South Fork at a point in the Southeast quarter of the Southeast quarter of Section 22, Twp. 5 North, Range 36 E. W. M., and furnishes water for its power plant, which is located in the Northwest quarter of the Southwest quarter of Section 18, Twp. 5 North, Range 36 E. W. M. Couse Creek, flowing from the west, enters the main stream a short distance above the city of Milton and just below the city's hydroelectric power plant.
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> "The delta formation comprises lands in Sections 12, 1, 2 and 3, Twp. 5 North, Range 35 E. W. M., and in Sections 34, 35, 36, 25, 26 and 27, Twp. 6 North, Range 35 E. W. M.
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> "The first division of the stream in this delta formation is immediately below the bridge crossing the river in the Southwest quarter of the Northeast

quarter of Section 12, Twp. 5 North, Range 35 E. W. M. At this point the stream divides into the Little Walla Walla and the Tumalum (as called in Oregon) or Main Walla Walla (as called in Washington).

"The Little Walla Walla in turn, after flowing a distance of about a mile, at a point in the Northeast quarter of Section 2, Twp. 5 North, Range 35 E. W. M. (called locally 'the Frog'), divides into the Ford Branch and the Crocket Branch. It is at this point that the water is measured into the ditch of the Milton, Freewater & Hudson Bay Irrigation Company.

"The Crocket Branch, immediately below, divides into the East and West branches of the Crocket, and the West branch of the Crocket divides into three prongs. The two easterly of these prongs join, about a mile and a half below, the East branch of the Crocket and discharge into the East Prong of the Little Walla Walla Spring Branch, which in turn empties into the East Little Walla Walla River across the line in the State of Washington. The East Little Walla Walla River discharges into the main stream near the Northeast corner of Section 10, Twp. 6 North, Range 35 E. W. M., in the State of Washington.

"The several prongs of the West branch of the Crocket, which unite in the Northeast quarter of Section 26, Twp. 6 North, Range 35 E. W. M., with the East branch of the Crocket to form the East Prong of the Little Walla Walla River Spring Branch, contribute little, if any, water to this Spring Branch during the irrigation season.

"Beginning in Sections 23 and 24, Twp. 6 North, Range 35 E. W. M., there are numerous springs which supply the water during the irrigation season to this East prong Spring branch, Ballou Spring Creek, Big Spring Branch and Grandview Creek, which form the East Little Walla Walla River in Washington.

"Lewis Spring Branch rises to the west of these springs in the Southeast quarter of the Southwest

quarter of Section 23, Twp. 6 North, Range 35 E. W. M., in the State of Oregon. Its waters are all diverted for irrigation during the irrigation season. The natural drainage of the lands watered from the Lewis Spring Branch is toward the Northwest. These waters come to the surface in a spring arising just across the line in the State of Washington. This spring forms the beginning of Walsh Creek in that state.

"The Westerly prong of the West branch of the Crocket unites with the Ford branch at a point in Section 22, Twp. 6 North, Range 35 E. W. M., to form the West prong of the Little Walla Walla, which crosses the line into the State of Washington, where it is known as the West Little Walla Walla River. The West Little Walla Walla River empties into the main stream in Section 31, Twp. 7 North, Range 35 E. W. M., in the State of Washington, below the intake of the canal of the Gardena Project.

"The Westerly prong of the West branch of the Crocket unites with the Ford branch in Section 22, Twp. 6 North, Range 35 E. W. M., to form the West prong of the Little Walla Walla. These two branches, however, furnish little, if any, water to the West prong during the irrigation season. Springs in and near the channel of the West prong constitute substantially its only supply of water during the irrigation season.

"West of the center line of Sections 22 and 27, Township 6 North, Range 35 E. W. M., rises the East branch of Mud Creek and the Middle branch of Mud Creek, which unite to form Mud Creek in Washington, which flows into the Walla Walla River in Section 36, Twp. 7 North, Range 33 E. W. M.

"Further west is South Mud Creek, Schwartz Spring Branch and Dry Creek, which are tributaries of Pine Creek. South Mud Creek crosses the State Line North of Section 15, Twp. 6 North, Range 34 E. W. M., and flows westerly in the State of Washington about a quarter of a mile from the State Line to Pine Creek. It is known as Little Mud Creek in

the State of Washington. Pine Creek enters the main stream in Section 2, Twp. 6 North, Range 33 E. W. M., below all the diversions on the main stream involved in these proceedings. Johnson Creek, Goodman Spring branch and Dugger Creek are spring branches in Oregon in the water shed of Pine Creek, but have no surface channel connection therewith.

"Birch Creek rises in the State of Oregon and flows Northwesterly and westerly not far from the State Line, until a short distance from the main stream, where it turns northerly, crosses the line, and enters the main stream in Section 13, Twp. 6 North, Range 35 E. W. M., in the State of Washington just North of the State Line.

"Shortly after passing the line into the State of Washington, the main stream turns and flows through wide valleys in a westerly direction a distance of approximately thirty miles, where it empties into the Columbia River, near Wallula.

"The principal tributary of the main stream in the State of Washington is Mill Creek, which also rises in the Blue Mountains in the State of Oregon. None of the waters of the water shed of this tributary reaches the main stream in the State of Oregon. Approximately twelve miles above the confluence of Mill Creek with the Walla Walla River, the tributary divides, one branch forming Yellowhawk Creek. Yellowhawk Creek, in turn, divides, one branch forming Garrison Creek. The courses of Yellowhawk Creek and Garrison Creek diverge for a ways, then run nearly parallel in a southwesterly direction to the main stream, Garrison Creek entering the main stream in the Northeast quarter of the Southeast quarter of Section 4, Twp. 6 North, Range 35 E. W. M., and Yellowhawk Creek entering the same in the Northeast quarter of the Northwest quarter of Section 11, Twp. 6 North, Range 35 E. W. M. The intake of the Gardena Project is located on the main stream between the two points.

"Garrison Creek has no tributaries, except a few inconsequential spring branches.

"Cottonwood Creek, Russel Creek and Lasater Spring Branch are tributaries of Yellowhawk; the lower of these tributaries entering the same about one mile and a half above its mouth. Reser Creek in turn is a tributary of Russell Creek. About a mile and a half above the Yellowhawk division, Mill Creek divides, one branch being Titus Creek, which parallels and then unites with Mil' Creek about a mile below the Yellowhawk division. Mill Creek runs through the City of Walla Walla and enters the main stream near the Whitman Mission, in Section 31, Twp. 7 North, Range 35 E. W. M.

"At the point of the Yellowhawk division of Mill Creek, controlling works have been constructed and the waters of Mill Creek are apportioned between the two streams in accordance with the priorities of the rights of persons entitled to water from the two streams, except rights in lower Mill Creek, below the Southeast quarter of the South east quarter of Section 23, Twp. 7 North, Range 35 E. W. M., which for practical purposes are administered independent of the rights on the upper portion of the stream above that point.

"Stone Creek is a tributary of the main stream, entering the same below Yellowhawk in the Southwest quarter of Section 3, Twp. 6 North, Range 35 E. W. M., and below the intake of the canal of the Gardena Project. Doan Creek is a tributary of lower Mill Creek and enters the same in the Northwest quarter of the Northwest quarter of Section 32, Twp. 7 North, Range 35 E. W. M. The Touchet River is a tributary of the main stream, entering the same in Section 4, Twp. 6 North, Range 33 E. W. M. McEvoy Spring Branch enters the main stream in the Southwest quarter of Section 3, Twp. 6 North, Range 35 E. W. M., above the intake of the canal of the Gardena Project. There are other spring branches entering the stream which are two inconsequential to mention specifically. Yellowhawk Creek, East Little Walla Walla River, McEvoy Spring Branch and Birch Creek are the only tributaries entering the

main stream in the State of Washington above the intake of the canal of the Gardena Project."

Paragraph 2 is a limitation of the issues as to the City of Walla Walla, Attalia Irrigation District, Touchet River, Mud and Pine Creeks, and effectually eliminates these specified rights and tributaries from further consideration by the court.

STIPULATION NO. 3.

Stipulation No. 3 is an agreed statement as to (1) land forms, drainage and climate; (2) irrigation practices; (3) crop production; (4) community development; (5) population, farm acreage and assessed values, priorities and approximate acreage. It is not deemed advisable to in any way abbreviate or abstract this stipulation. It is therefore set forth in full:

"1.

LAND FORMS, DRAINAGE AND CLIMATE
(Based largely on the report of A. M. Piper)

"The Walla Walla Basin is part of a plateau extending from the Columbia River to the Blue Mountains. The western edge of the adjacent Blue Mountain section is about 10 miles East of the city of Walla Walla. This plateau has moderate relief, ranging from 1900 feet elevation along the flank of the Blue Mountains to 400 feet in the river bottoms at the Western edge of the area. The only extensive flat areas are the flood plains and terraces developed by the larger streams. For the most part, the upland areas comprise sub-parallel ridges tending North 20 degrees East, separated by V-shaped valleys which commonly are 50 to 300 feet deep. These ridges and slopes have a deep fertile soil. The Walla Walla

Valley is rudely triangular, and from apices in the canyons of Mill Creek and the Walla Walla River, converges westward to the head of the gorge which begins 20 miles to the West. Near Whitman, where the Walla Walla River and Mill Creek join, the valley is ten miles wide. At Touchet it is about four miles in width. The valley comprises three distinct physiographic divisions. In order of decreasing age, these are: the Gardena terrace, whose remants in places are as much as 120 feet above the flood plains of the river; the Low terrace, whose remnants parrallel the flood plains and are commonly less than 20 feet above them; and finally the alluvial fans of the Walla Walla River and of Mill Creek and the flood plains of the river and its tributaries.

"The Gardena terrace is now thoroughly dissected, and is represented by numerous remants, which range in size from flats 18 miles in length to hillocks 100 yards across. The most prominent remant lies south of the Walla Walla River, in the Western part of the area upon which is situated the Gardena irrigated district, from which this land form is named. This remnant in places stands 120 feet above the flood plain of the river, southeast of Touchet, and 40 feet above the flood plain of Dry Creek in Oregon, 10 miles to the East. The remnant flanks the Southern wall of the valley for a distance of 12 miles. The larger remnant of the Gardena terrace lies North of Walla Walla. In the central plain of the basin the terrace has been thoroughly dissected by the several distributaries of the Walla Walla River and Mill Creek, which have left long narrow remnants. In general the gradient of the Gardena terrace is slightly less than that of the adjacent flood plain. Remnants in the flood plain of the area are 100 to 120 feet above the flood plain, and slope westward less than 20 feet to the mile. Those in the Eastern part of the area stand only 10 to 25 feet above the fans of the Walla Walla and Mill Creek and decline westerly 60 to 75 feet in a mile.

"The Low terrace is inconspicuous and is represented by remants less than one mile wide and as much as 8 miles long, and which border the flood plains. Remnants of the Low terrace are readily discernible in the Western part of the area, where they are 5 to 20 feet above the flood plain. Upstream they become lower and less discernible and commonly merge into the flood plain without any topographical break.

"The alluvial fan of the Walla Walla River slopes North from an apex at the mouth of the rock-walled canyon at Milton, and is about 4 miles long and 4 miles wide along the outer margin. At its apex the fan is about 1070 feet above sea level. From this altitude it descends about 50 feet to the mile and stands about 850 feet above sea level at its outer margin. This feature is delimited to the North and West by the upstream ends of the several remnants of the Gardena and Low Terraces. The Walla Walla River, commonly called the Tumalum, follows its East margin. Below the fan the Walla Walla River and its several distributaries have developed flood plains which generally are less than 0.5 miles wide and which are separated or bordered by long narrow remnants of the Low terrace or by higher remnants of the Gardena terrace. The alluvial fan of Mill Creek is less prominent than the fan of the Walla Walla at Milton. This fan originates at an apex about 2 miles east of Walla Walla and is roughly relimited by Yellowhawk Creek on the South, by the main channel of Mill Creek on the North, and by several narrow remnants of the Gardena terrace on the West. The maximum width of one and a half miles is attained at Walla Walla. Both above and below the fan, the flood plain of Mill Creek averages 0.5 miles wide. The gradient of the Walla Walla River decreases progressively downstream. At the junction of the canyons of the North and South forks it is about 80 feet in a mile. Across the fan North of Milton the average slope is about 60 feet in a mile. At Whitman, in the central part of the valley, the

slope is 40 feet to the mile, and further downstream, between Touchet and the head of the gorge, it becomes less than 10 feet to the mile. The Walla Walla River drains about 150 square miles above Milton, its drainage area being moderately rugged and moderately high in altitude. Little rain falls on the drainage area in the summer, and a large part of the precipitation in the winter is snow. Under these conditions, the stream is subject to an annual spring freshet and is flashy throughout the year.

"The gradient of Mill Creek is about 100 feet to the mile at the mouth of the canyon, 65 feet to the mile at Walla Walla, and 50 feet to the mile near Whitman, which is just above its junction with the Walla Walla River.

"The Walla Walla Basin has a semi-arid climate, with warm dry summers and cold wet winters. The mean temperature in the warmest month, which is generally July, is 73.9 deg. F. at Milton, 76.5 deg. F. at Walla Walla, and 72.8 deg. F. at Lowden. In the coldest month, which generally is January, it is 31 deg. F. at Milton, 30.9 deg. F. at Walla Walla, and 29.1 deg. F. at Lowden. The mean annual temperature is 52.6 deg. F. at Milton, 53.9 deg. F. at Walla Walla, and 51.3 deg. F. at Lowden. During the past ten years, the highest recorded temperature was 107 deg. F. and the lowest was —15 deg. F. During the same period, the latest killing frost in the spring has ranged from March 9th to May 9th and the earliest killing frost in the autumn from September 21st to November 12th. The average growing season or frost-free period, is 193 days. The average annual rainfall at Milton, during the 11 year period 1922-1932, was 12.99 inches, of which 1.54 inches fell during the three summer months, July, August and September. The average annual fainfall at Walla Walla during that period was 14.37 inches, of which 1.64 inches fell during the three summer months. The average annual rainfall at Lowden, during the same period, was 9.52 inches, of which 1.25 inches fell during the three summer months.

II.

IRRIGATION PRACTICES.

"The growing season in the Walla Walla Basin extends from April to October, inclusive. Irrigation during this growing season is called herein summer irrigation, and irrigation during any other part of the year is herein called winter irrigation. Winter irrigation is practiced on the lands served by the Milton, Freewater & Hudson Bay Irrigation Company, and on some of the lands of the Gardena project. The balance of the Walla Walla Basin is served by summer irrigation. In all cases where the water supply is not sufficient to supply water during the entire growing season, the practice is to store water in the soil, where possible, by irrigation prior to the growing season and whenever water is available. In the summer irrigation of orchards, alfalfa and grain, outside of the gravelly soil, the practice is to apply water about once every two weeks. In areas of gravelly land, the practice is to apply water to such crops once a week. In the gravelly soil in and around Milton and Freewater, for strawberries, tomatoes, garden vegetables and short-rooted crops, the practice is to apply water two to three times a week. Where the application is made several times a week, the period of application is from two to four hours each time. Where it is once a week, the time of application is from eight to twelve hours. Where application is made at longer intervals, the length of time depends upon the amount of acreage, and in most cases a continuous flow to each irrigator is used. The flooding method of irrigation is not practiced. Nearly all the irrigation is by what is known as the corrugation method.

"It is the general practice in the orchards to grow cover crops of clover, alfalfa and the like, as a protection against evaporation. These crops are usually chopped into the soil as fertilizer.

"Controlling works are found at the principal points of diversion from the stream. Weirs for meas-

uring individual rights are in general use throughout the valley.

"Rotation is practiced to a considerable extent. In Oregon, in the deep soils, the rotation period is from one to two weeks for alfalfa and grain. In the gravel soils, for orchards and alfalfa, the average irrigated acreage for a group of rotaters is about 60 acres, and rotation is practiced on a weekly basis. Where the gravel soil about Milton and Freewater is cultivated to strawberries, tomatoes, vegetables and short rooted crops, the average irrigated acreage for a group of rotaters for such crops is from 10 to 20 acres and rotation is practiced on both a twice a week and a thrice a week basis. Rotation under the Oregon decree may be enforced by the water master, and in some instances is carried out by agreement of the parties. In Washington, rotation is practiced under all ditches operated by irrigation districts, and in the vicinity of Walla Walla, by private arrangement between the individual water users. The period of rotation varies greatly, but averages, it is estimated, about ten days.

"In some instances there is a run-off from the irrigated lands, caused by the use of a large head of water. This run-off, locally called waste water, is utilized on succeeding tracts.

"In the section around Milton and Freewater, there are approximately 300 wells which pump water from the lower gravel strata and apply it to irrigation. In Washington there is little irrigation from wells.

III.

CROP PRODUCTION.

"*Oregon.* In Oregon the crops consist of wheat, alfalfa, hay, prunes, apples, cherries, tomatoes, berries, vegetables and nursery stock. In the irrigated section there are from 3000 to 4000 acres of prunes, yielding about 6 tons to the acre; from 1000 to 1800

acres of apples, yielding about 8 tons to the acre; 200 to 300 acres of cherries, yielding about 4 tons to the acre; about 200 acres of tomatoes, yielding 10 tons to the acre. (The acreage of tomatoes has been cut down this year from past years, in accordance with the general policy of cutting the amount of production. Last year the acreage was about 300 acres.) There are about 125 acres of berries, yielding about a ton to the acre. Nursery stock of about 175 acres supplies about 40 carloads per year, besides the local market. Alfalfa hay is raised on from 2000 to 2500 acres of land, and yields from 5 to 7 tons per acre, depending on the length of time that water is available for irrigation. In this district there are approximately 2500 dairy cattle, exclusive of those kept for family purposes only. In the line of vegetables, squash, melons, potatoes and other varieties yield in proportion to the tomatoes. There has also developed a considerable flower trade. A number of growers specialize in peonies, supplying the trade not only with peony blooms but with the plants.

"*Washington.* The crops of the valley in Washington consist principally of alfalfa, wheat, vegetables and fruits. It is estimated that 40,000 tons of alfalfa are raised in this area annually. The average acreage yield is 6 tons. Wheat on irrigated land is generally raised as part of the rotation between alfalfa plantings. It is estimated that 1000 acres of wheat are irrigated in this area annually. The average acreage yield is 50 bushels. Crops of vegetables are grown quite extensively. The average annual yield of the following varieties is: Head lettuce, 49 cars; cabbage, 16 cars; rhubarb, 35 cars; onions, 300 cars; spinach, 100 cars; tomatoes, 30 cars; cantaloupes, 46 cars; potatoes, 307 cars; mixed vegetables, 84 cars. The average acre yield of the following varieties is: Asparagus, 500 boxes to the acre; spinach, 500 boxes per acre; onions, 600 sacks per acre; potatoes, 200 sacks per acre. Fruits are also grown in this area. In 1932, 125 cars of apples and 302 cars of prunes

were estimated to have been shipped out of Walla Walla. Apples in this territory yield from 5 to 10 boxes per tree. Prunes yield as high as 600 boxes to the acre. The sweet varieties of cherries are grown, yielding as high as 100 pounds to the tree. It is estimate that 145 tons of cherries were raised in 1929. Peaches and pears are grown successfully, principally for the local market. 16 tons of peaches were raised in 1929. An average of 10 cars of grapes are shipped from Walla Walla annually. Strawberries yield as high as 600 crates to the acre. Approximately 100 acres in this area are devoted to berry culture. It is estimated that there are 4000 milk cows on the farms in this area. Two and three-quarters million gallons of milk were produced in 1929. Poultry is also raised extensively. 7500 turkeys, 1600 ducks and 1000 geese were estimated to have been raised in this area in 1929. $47,000.00 was also realized from the sale of chickens in that year.

IV.

DEVELOPMENT OF COMMUNITY.

"*Oregon.* The Oregon community supports a flour mill, a sawmill and box factory, cider works, a dehydrating plant and a vinegar plant, in addition to a number of commission houses and fruit and vegetable distributors. In order to handle the fruit and vegetable crops, five cold storage houses have been erected and are operated by the various companies.

"The district contains ten grade schools, having a total of about 1000 pupils, and a splendid Union High school. There are about ten churches. This property, together with the municipal buildings of the two towns, represents a value of about half a million dollars.

"*Washington.* In the city of Walla Walla there are 66 manufacturing plants, including four flour and feed mills, a meat packing house, a cannery, special-

izing in vegetable canning, three creameries, an iron products foundry, two sash and door factories, a concrete pipe and conduit plant, and other small manufacturing enterprises. The annual value of the products of these industries is $6,279,166.00.

"The city of Walla Walla supports a high school, six grade schools, three parochial schools, three music schools and two colleges, with an aggregate average annual attendance of 5300 students. There are twenty-four churches, representing all principal denominations, four theatres and three hospitals. Grade schools and churches exist and are well distributed outside the city in this area.

V.

POPULATION, FARM ACREAGE AND ASSESSED VALUATION.

"The territory herein considered excludes all that part of the river basin which by stipulation has been heretofore removed from any issue in the case.

"*Oregon.* The related territory in Oregon, excluding the Hudson Bay lands, has a population, according to the 1930, census, of 4772, of which 2308 is urban, being the cities of Milton and Freewater, and 2464 is rural. In addition, the Hudson Bay lands are occupied by about 65 families, which would raise the total population of the district to about 5000.

"The irrigated lands are farmed intensively. The 6233.87 acres irrigated from the Walla Walla River, spring branches and East Prong of the Walla Walla, are divided in 889 farms, with an average acreage of 7.01 acres. The West Prong and Lewis Spring Branch have 618.74 acres, divided into 36 farms with an average acreage of 17.19. The Pleasantview Ditch Company irrigates 1249.18 acres, divided into 62 farms with an average acreage of 20.15. The Milton, Freewater & Hudson Bay Irrigation Company irrigates 2675.41 acres, divided into 57 farms, with an

average acreage of 47 acres. This makes a total acreage in the related area of 10,777.20, divided into 1044 farms, or an average acreage of 10.32 acres.

"This acreage has an assessed valuation, on the 1932 roll, exclusive of the Hudson Bay acreage, of $1,543,120.00. The Beauchamp land, of 86.67 acres, irrigated under the Hudson Bay, is assessed at $11,810.00, and the Markham land, 200 acres, is assessed at $21,560.00. Based upon these assessments, it is estimated that the assessed value of the Hudson Bay lands is substantially $250,000.00. The assessed valuation of the cities of Milton and Freewater is $915,975.00. This makes a total assessed valuation of the related district of $2,709,095.00. The assessed valuation is usually counted as averaging about fifty per cent of the actual value.

"*Washington.* The related territory in Washington, outside the incorporated towns, has a population of 7090, according to the 1930 U. S. census. The population of the city of Walla Walla, according to the same authority, is 15,976. There are 9615 acres of irrigated land in the vicinity of Walla Walla. The size of the farming units in this area varies from 1 to 500 acres. The average is 17 acres. In the vicinity of Lowden there are 3231 acres, ranging in size of unit from 2 to 160 acres with an average of 38 acres. In the Gardena district, the smallest unit is 4 acres, the largest 200 acres, and the average 70 acres.

"The above described acreage in the vicinity of Walla Walla has an aggregate assessed valuation, on the 1932 tax roll, of general taxes, of $3,845,942.00. The assessed valuation of lands in the city of Walla Walla for the same year is $8,137,409.00. In the vicinity of Lowden, lands were assessed for the same year at $225,670.00, and in the Gardena District, at $234,663.00. The total aggregate assessed valuation of the land in the related area is $12,443,684.00. Under the law in the State of Washington, lands are assessed for taxation purposes at fifty per cent of their actual value.

"PRIORITIES AND APPROXIMATE ACREAGES, AS SHOWN BY DECREES AND PERMITS.

"The following tabulation shows the approximate acreage under each year's date of priority, as shown by the several decrees of the two states, for the related area, excluding all that part of the river basin which by stipulation has been heretofore removed from any issue in the case, and including the Gardena appropriation, the priority of which is contested by Oregon.

	OREGON			WASHINGTON		
Year	Walla Walla River	Waste	West Pg. in Oregon	Walla Walla River	Tributaries	West Pg. (Little W. W. R.)
1859					37.15	
1861					314.00	
1862	35.84					
1863					83.50	
1864	38.22				81.61	
1865	37.12				124.23	
1866	3.30				137.13	
1867	8.24					
1868	60.28				89.90	
1869	4.18				44.45	
1870	47.31			160.00	8.583	
1871	11.06					35.00
1872	55.78				79.75	
1873	65.50				13.00	
1874	25.26					
1875	291.47				20.40	
1876	72.90	15.00			1.32	
1877	87.73				12.00	
1878	81.74				54.77	
1879	31.55					
1880	180.17		43.80		25.20	
1881	123.46		7.50		51.50	
1882	86.90				91.00	
1883	55.09		13.00		61.73	
1884	16.50			125.00	149.48	
1885	135.35		14.00		94.88	

	OREGON			WASHINGTON		
Year	Walla Walla River	Waste	West Pg. in Oregon	Walla Walla River	Tributaries	West Pg. (Little W. W. R.)
1886	54.51		32.00		141.35	20.00
1887	217.76				30.50	
1888	93.38					
1889	65.86				98.91	462.90
1890	113.72	10.00	60.29		48.50	
1891	131.49				178.67	29.00
1892	264.05	10.00	15.00	8221.11	647.63	
1893	157.54		9.75	431.96	18.00	
1894	102.12		82.00		477.97	187.70
1895	242.07		75.50		246.75	
1896	30.72			180.79		65.00
1897	128.31		10.50		141.25	
1898	44.37		9.50		160.00	
1899	7.06				6.50	
1900	198.99		50.00		99.33	
1901	87.69	49.90	11.00		105.45	1.00
1902	165.90	33.90	72.00		38.00	52.00
1903	2725.04	15.30	7.50	40.00	147.06	
1904	23.02	8.70	14.50	330.00	884.58	
1905	136.35	12.80			25.05	10.00
1906	40.06		16.00		123.75	
1907	80.99	8.75	7.00	50.00	153.15	
1908	193.82	38.84	16.70		202.55	106.00
1909	316.71				42.00	
1910	33.25				32.28	
1911					50.00	
1912	962.14			15.00	371.00	
1913	392.25				33.19	
1914	14.00				136.50	
1915	97.00				63.10	
1916	28.80				9.40	33.00
1917	59.00				63.28	21.00
1918	28.00	8.00			49.90	
1919	59.00		9.25	5.00	29.00	35.00
1920	27.50	15.00	32.00	50.00	61.74	32.00
1921	12.00				75.52	
1922	140.00	113.00			3.60	

	OREGON		WASHINGTON			
Year	Walla Walla River	Waste	West Pg. in Oregon	Walla Walla River	Tributaries	West Pg. (Little W. W. R.)
1923	140.00	37.00			11.00	
1924	91.00	5.00		35.00	6.00	
1925	41.00	25.00			0.50	
1926	3.50		10.00	880.00	1419.80	49.00
1927	90.40			15.00		
1928	281.15				25.00	
1929	30.00				7.50	
1930	44.80					
1931	1.00					

STIPULATION NO. 4

This stipulation qualifies for admission as evidence (1) Youngs' soil map, (Washington Exhibit 15); (2) report of A. M. Piper and others on ground water, (Washington Exhibit 16); (3) Map of lands involved in the adjudication of rights in the Walla Walla River showing Walla Walla River tributaries and diversions, (Washington Exhibit 17); (4) state constitutions and statutes in argument or by reference.

STIPULATION NO. 5

This stipulation embodies such facts relative to the history and rights of the Gardena Farms District as the parties were able to agree upon. It sets forth that the diversion by the Gardena Farms District, formerly the Walla Walla Irrigation Company, is the largest diversion from the Walla Walla River in the State of Washington and fixes the point of this diversion and the course of the canal. By decree of the Superior Court of the State of Washington for Walla Walla County, the Walla Walla Irrigation Company was given a priority of 1892 with the right

to irrigate 7,000 acres of land with a maximum amount of 93.333 c.f.s. of water from April 1st to July 1st, and 70 c.f.s. of water from July 1st to October 1st, subject to the following limitation:

> "That claimant's 5,000 acres of land, which was the amount irrigated at the time of the hearing of the claim of said Walla Walla Irrigation Company before the referee, to wit, on the 29th day of March, 1926, is entitled to use of water to the extent of 66.67 cu. ft. per second from April 1st to July 1st, 50 cu. ft. per second from July 1st to October 1st, and 1 cu. ft. per second for each 50 acres of land for winter irrigation; provided, that from and after said 29th day of March, 1926, the remaining lands susceptible to irrigation which may in the future be developed, shall be entitled to a quantity of water for irrigation at the rate herein allotted, as said lands may be brought into cultivation from time to time until a maximum of 7,000 acres are developed and the maximum of water herein awarded is used; and that the amount of land to which this claimant is entitled to water under the above provision shall be determined at the beginning of the spring irrigation season each year, by the State Supervisor of Hydraulics."

The certificate of water right following upon the decree is attached to the stipulation and marked Exhibit "A." In 1928 the Gardena Farms District succeeded to the rights of the Walla Walla Irrigation Company. In the beginning J. F. Boyer, J. T. Kirk and W. F. Courtnay caused preliminary surveys to be made and a canal route to be located. Several notices of appropriation were posted at the proposed point of diversion and recorded in the proper office for the recordation of such notices. No diversion was ever made from the Little Walla Walla River.

The stipulation then proceeds:

"In the spring of 1892, E. C. Burlingame, a contractor, became interested in the project and made further surveys and investigations of the route of the canal, and thereafter acquired an interest therein.

"Soon thereafter in the same year a corporation was formed, known as the Walla Walla Irrigation Company. On November 5, 1892, formal conveyances of the rights of the individual appropriators were made to the Company, by deed recorded January 24, 1893, in Book 53, at page 179, Deed Records of Walla Walla County, Washington.

"Mr. Burlingame performed the construction work for the Company using his own equipment and teams up to the time of the formation of the irrigation district which succeeded to the rights of the Company in 1928.

"In August, 1892, actual construction work on the canal was begun.

"Prior to the year 1905 the canal was constructed from the diversion point in the McBean donation land claim in the SW¼ SW¼ Section 3, Twp. 6 North Range 35 E. W. M. along the route of the canal as shown on the official map herein, to a point in Lot 3 of Fractional Section 13, Twp. 6 North Range 34 E. W. M. where the map indicates that the canal divides. From said divisional point one division of the canal was constructed in a Southwesterly direction into the State of Oregon, and also from said divisional point, prior to the year 1905, one division was constructed in Northwesterly direction along the route indicated on the map to a point in Section 5, Twp. 6 North Range 34 E. W. M. About a mile from the upper end of the syphon.

"In the winter and spring of the year 1905 an inverted syphon was constructed from a point in the SW¼ of the NW¼ of said Section 5, to a point in the NE¼ SE¼ of Section 12, Twp. 6 North Range 33 E. W. M. from which point the distribution system for the irrigation of the lands West and South of

the syphon was constructed and has been extended as the demands of irrigation required. This syphon has a head of 145 feet, carries the water of the canal across the valley of Pine Creek a mile and a half in width, and is built of wood staves and steel bands. It was originally of a diameter of 38 inches and has since been replaced by Gardena Farms District by one 44 inches in diameter.

"For the first three miles of the course of the canal from the river the soil conditions presented no serious difficulties in construction. From there to the head of the syphon the course of the canal was in light and ashy soil requiring the canal to be puddled and causing some breaks and slides. The excavation and filling was done with teams and scrapers.

"As a part of this construction work there were cuts two of which were approximately 26 feet in depth at their deepest point, one about 1500 feet and the other about 1000 feet, in length. Some fills also had to be made. The canal was constructed 16 feet on the bottom from the diversion point to the division of the canal at the point in Lot 3 of Fractional Section 13, Twp. 6 North Range 34 E. W. M. and from that point to the head of the syphon is now 10 feet on the bottom, all with side slopes of 1½ to 1 and with a depth of about 6 feet. The canal has a fall of .5 of a foot to a 1000 feet and a capacity of 150 c. f. s. in that portion with 16 inches bottom.

There is then set forth the structures along the canal and the devices installed for the purpose of water use. The expenditures upon the canal from 1901 to 1925 are set forth as $227,078.56, which expenditures are segregated as to their nature and as to the years in which they were made in an exhibit attached to the stipulation.

In the year 1910 the company entered into arrangements to receive sewage water from the City of Walla Walla. The stipulation provides:

"In the year 1910 the Company entered into arrangements to receive sewage water from the City of Walla Walla and during the years 1910, 1911 and 1912 expended $49,253.92 for concrete sewer pipe, $3954.02 for construction work, $1471.64 for engineering, and $1771.60 for rights of way, for the purpose of conveying such sewage water to the Company's canals. This water was used until the year 1924 when such use was discontinued and the works abandoned, with the exception of a small part of the concrete pipe used for a spillway from the canal. From about 1920 to 1924 the Company contracts for the sale of water contained the following clause: 'It is understood that sewage water from the City of Walla Walla is part of said water supply.'

"In the year 1907 the Company expended $798.00 in investigation of reservoir sites. No reservoir has been secured. The Company also expended for the drilling of wells the following sums: In 1905, $240.-50; in 1909 $6155.50; and from 1910 to 1913 the sum of $441.25, and in 1924 and 1925 the sum of $3149.08, making a total of $9980.33 expended for work in an attempt to develop an additional water supply from wells, which was without result.

"Water was first diverted from the river into the canal in the year 1893 for puddling purposes and turned out through the spillway into the West Little Walla Walla River. In the year 1898 water was first used for irrigation when 68 acres along the line of the canal were irrigated. In 1899, 20 additional acres were irrigated but these latter mentioned lands have since been abandoned. In 1901, 280 acres were irrigated in Oregon from the canal running from the divisional point in Lot 3 of Fractional Section 13, Twp. 6 North Range 34 E. W. M. into Oregon, and between 1901 and 1918, 72 additional acres in Oregon were irrigated from the canal, but the irrigation of these lands was discontinued in 1919, when the Company abandoned the operation of this canal. These lands are now irrigated from the

Milton-Freewater and Hudson Bay ditch. In 1898, 68 acres were watered from the canal; in 1899 20 acres additional were watered in Washington, which were later abandoned.

"In 1904, 193 acres were watered from the canal in Washington, including the 20 acres above mentioned as later abandoned. Approximately 1133.4 acres East of the syphon in Washington are now irrigated from the canal. The balance of the lands irrigated from the canal lie West and South of the syphon. Water was first run through the syphon in 1905 and used for irrigation."

There is then set forth by years the amount of irrigation company stock sold and the names of the individuals to whom said stock was sold. This tabulation shows that from 1898 to 1930 there was a continuous sale of the stock of the company which water shares so sold provide in total for the irrigation of 5793.09 acres, of which 372 acres have been abandoned, leaving water stock outstanding for the irrigation of 5421.09 acres, of which 216.56 acres are not now being irrigated. A survey by Oregon indicates that in 1933 there were irrigated from the system 4530.2 acres in Washington and 721.3 acres in Oregon, or a total of 5251.5 acres.

The soil west of the siphon is rich and with irrigation produces abundant crops. Approximately 85 families live on the land served by this irrigation system. West of the siphon is a church and a school employing two teachers.

STIPULATION NO. 6

Stipulation No. 6 is merely a statement of the contentions of the parties as to the Gardena right.

STIPULATION NO. 7

Stipulation No. 7 is a statement of the parties as to their respective contentions as to water requirements upon the lands to which water has been awarded under the decrees of the courts and by the water administrators of the two states. It contains no statements of agreed fact.

STIPULATION NO. 8

This stipulation provides that the findings and orders of determination of the State Water Board or State Engineer of the State of Oregon, and the findings and reports of the Referee of the State of Washington, filed in the cases in which decrees are admitted in evidence, may be admitted in evidence as a part of the respective decrees.

STIPULATION NO. 9

This stipulation sets forth the contentions of the parties as to the wells from which water is used within the State of Oregon.

The State of Washington denies the right of the State of Oregon to grant permits for the sinking of wells without reference to the rights of the irrigators in the State of Washington. Broadly the State of Washington contends that by the sinking of the wells the sub-surface water is intercepted and the otherwise available supply of the river to Washington irrigators is diminished, and that the water produced by the wells is wastefully and not beneficially used. Oregon denies these allegations and alleges that they may capture the sub-surface water without regard to Washington rights; that the waters in the wells are mere percolating waters and that the owner of the surface land has

the right to capture them as a part of the property of the owner. Oregon contends that its permits to sink wells do not grant a water right; that the water right is already in the owner of the land, but that the permit is merely to record the use, and that such water right could not be interfered with either by the State of Washington or the State of Oregon. Oregon contends further that the waters intercepted are not a part of the stream flow of the Walla Walla River and do not in any way reduce the surface supply available in the State of Washington; that the digging of the wells and the expenditures incident thereto and to the production of the water is indicative of the inadequacy of the surface water supply.

STIPULATION NO. 10

This stipulation is in the nature of a supplemental pleading or an argument and sets forth the respective contentions of the parties as to adverse use, estoppel, vested rights, and the claim of Oregon that the Tum-a-lum River in the State of Oregon has been administered as a separate stream in the State of Oregon.

STIPULATION NO 11

This stipulation sets forth historically the political history of the states of Washington and Oregon and further that title to the lands now in private ownership within said two states has generally been acquired under the public land laws of the United States. Paragraph 3 of the stipulation materially limits the pleadings in the case in the following particular:

> "It is agreed that, for the purposes of this case, the individual rights of the respective land owners

and water users concerned in both states are governed by the doctrine of appropriation, and that no issue of riparian ownership as to such individual rights shall be raised in this case by either state."

THE ISSUES

Under the pleadings as framed this court is required to decide:

(a) Is the State of Oregon depriving the State of Washington of the use of an equitable proportion of the waters of the Walla Walla River, a non-navigable interstate stream flowing within said two states?

(b) If so, to what extent?

(c) Shall an injunction issue restraining the State of Oregon from the wrongful diversion of the waters of the Walla Walla River?

THE LAW APPLICABLE TO DIVISION OF WATERS OF INTERSTATE STREAMS

This suit is a bill in equity brought by the State of Washington against the State of Oregon as an original proceeding in this court to adjudicate the relative rights of the two states to the use of the waters of the Walla Walla River, a non-navigable interstate stream. Each state, under the allegations of the pleadings, claimed riparian rights for the lands adjacent to the stream and in addition thereto rights originating under the law of prior appropriation. After issue was joined the parties filed their stipulation containing among other provisions the following:

> "It is agreed that, for the purposes of this case the individual rights of the respective land owners and water users concerned in both states are governed

> by the doctrine of appropriation, and that no issue of riparian ownership as to such individual rights shall be raised in this case by either side." (Stip. No. 11.)

The case is to be adjudicated, therefore, as one in which each of the contending states has adopted the law of prior appropriation as to the origin of rights to the use of water.

The jurisdiction of this court to adjudicate such a controversy is supported by ample authority.

> Kansas v. Colorado, 206 U. S. 46.
> Wyoming v. Colorado, 259 U. S. 419.
> Connecticut v. Massachusetts, 282 U. S. 660.
> New Jersey v. New York, 283 U. S. 336.

The rules of law applied by this court in the determination of cases involving interstate streams, whether the rights sought to be protected arise under the doctrine of riparian right or under the law of prior appropriation, are stated by this court as follows:

Kansas v. *Colorado*, 206 U. S. 46, 97:

> "One cardinal rule, underlying all the relations of the states to each other is, that of equality of right. Each state stands on the level with all the rest. It can impose its own legislation on no one of the others and is bound to yield its own views to none. Yet, whenever, as in the case of *Missouri* v. *Illinois*, 180 U. S. 208, the action of one state reaches through the agency of natural laws into the territory of another state, the question of the extent and the limitation of the rights of the two states becomes a matter of justiciable dispute between them, and this court is called upon to settle that dispute in such a way as will recognize the equal rights of both and at the same time establish justice between them."

Connecticut v. *Massachusetts*, 282 U. S. 660, 669, 670:

> "The governing rule is that this court will not exert its extraordinary power to control the conduct of one state at the suit of another, unless the threatened invasion of rights is of serious magnitude and established by clear and convincing evidence."
>
> "For the decision of suits between states, federal, state and international law is considered and applied by this court as the exigencies of the particular case may require. The determination of the relative rights of contending states in respect of the use of streams flowing through them does not depend upon the same considerations and is not governed by the same rules of law that are applied in such states for the solution of similar questions of private right. *Kansas* v. *Colorado* 185 U. S. 125, 146. And, while the municipal law relating to like questions between individuals is to be taken into account, it is not deemed to have controlling weight.
>
> "As was shown in *Kansas* v. *Colorado*, 206 U. S. 46, 100, such disputes are to be settled on the basis of equality of right. But this is not to say that there must be an equal division of the waters of an interstate stream among the states through which it flows. It means that the principles of right and equity shall be applied having regard to the 'equal level or plane on which all the states stand, in point of power and right, under our constitutional system,' and that upon a consideration of the pertinent laws of the contending states and all other relevant facts, this court will determine what is an equitable apportionment of the use of such waters. *Wyoming* v. *Colorado*, 259 U. S. 419, 465, 470.

The suit of *Wyoming* v. *Colorado*, 259 U. S. 419, was brought by the plaintiff to prevent the diversion of water of the Laramie River arising in Colorado and flowing into Wyoming. Both states are in the arid region and apply the

doctrine of appropriation. The problem there presented was expressed by Justice Van Devanter as follows, page 470:

> "We are thus brought to the question of the basis on which the relative rights of these states in the waters of this interstate stream should be determined. Should the doctrine of appropriation, which each recognizes and enforces within her borders be applied? Or is there other basis which is more consonant with right and equity?"

After an elaborate discussion of the facts the court said:

> "We conclude that Colorado's objections to the doctrine of appropriation as a basis of decision are not well taken and that it furnishes the only basis which is consonant with the principles of right and equity applicable to such a controversy as this."

This doctrine was again announced in the case of *Connecticut* v. *Massachusetts*, 282 U. S. 660 at 672.

The rule adopted in the Wyoming-Colorado case as to priorities is not one of law, but one of equity. Under the conditions existing in that case such rule was applied as the measure best adapted to work out the equities between the parties.

Speaking in *Kansas* v. *Colorado*, this court says:

> "We must consider the effect of what has been done upon the conditions in the respective states and so adjust the dispute upon the basis of equality of rights as to secure as far as possible to Colorado the benefits of irrigation without depriving Kansas of the like beneficial effects of a flowing stream." 206 U. S. 100, 109.

In the case of *Kansas* v. *Colorado*, above cited, after having tabulated the growth in population, cultivation and

production which had accrued to the State of Colorado by virtue of the use of the waters involved in the controversy, the court uses this language:

> "Whatever has been effective in bringing about this development is certainly entitled to recognition, and should not be wantonly or unnecessarily destroyed or interfered with. That this development is largely owing to irrigation is something of which, from a consideration of the testimony there can be no reasonable doubt. It has been a prime factor in securing this result, and before, at the instance, of a sister state, this effective cause of Colorado's development is destroyed or materially interfered with, it should be clear that such sister state has not merely some technical right, but also a right with a corresponding benefit." id. 109.
>
> "It cannot be denied, in view of all the testimony (for that which we have quoted is but a sample of much more bearing upon the question), that the diminution of the flow of water in the river by the irrigation of Colorado has worked some detriment to the southwestern part of Kansas, and yet, when we compare the amount of this detriment with the great benefit which has obviously resulted to the counties in Colorado, it would seem that equality of right and equity between two states forbids any interference with the present withdrawal of water in Colorado for purposes of irrigation." id. 113.

No state can legislate for or impose its own policy upon another state, nor can the decrees entered in one state have any binding effect upon persons who were not parties thereto.

> Kansas v. Colorado, 206 U. S. 46.
> Nebraska Inv. Co. v. Corlett (Wash.) 172 Pac. 851.
> Savage v. Tacoma (Wash.) 112 Pac. 78.
> Savage v. McCorkle (Ore.) 21 Pac. 444.
> Carnes v. Dalton (Ore.) 110 Pac. 170.

In the Wyoming v. Colorado case, (at pp. 464, 465) this court, in commenting on the Kansas v. Colorado case, used the following language:

> "* * * As respects the scope and interpretation of the ultimate conclusion in that case it should be observed, first, that the court was there concerned, as it said, with a controversy between two States, 'one recognizing generally the common-law rule of riparian rights' and the other the doctrine of appropriation; secondly, that the diversion complained of was not to a watershed from which none of the water could find its way into the complaining State, but quite to the contrary; and thirdly, that what the complaining State was seeking was not to prevent a proposed diversion for the benefit of lands as yet unreclaimed, but to interfere with a diversion which had been practiced for years and under which many thousands of acres of unoccupied and barren lands had been reclaimed and made productive. In these circumstances and after observing that the diminution in the flow of the river had resulted in 'perceptible injury' to portions of the valley in Kansas, but in 'little, if any, detriment' to the great body of the valley, the court said, 'it would seem equality of right and equity between the two States forbids any interference with the present withdrawal of water in Colorado for purposes of irrigation;' * * * What was there said about 'eqality of right' refers, as the opinion shows (p. 97), not to an equal division of the water but to the equal level or plane on which all the States stand, in point of power and right, under our constitutional system. * * *"

THE FACTS

Develpoment in Washington

Washington's Exhibit No. 17 is a map of the area involved in this litigation and shows the interrelated streams

making up the Walla Walla River and available for the irrigation of the lands involved in the controversy. The City of Walla Walla is the center of a highly developed agricultural area. (Stip. No. 3). There have grown up in and about it such industries as its raw material and its market can sustain. It must be quite evident that the agricultural and industrial development of the area involved has proceeded without regard to state lines. As this development has progressed more lands have been made available for irrigation than the dependable water supply will now adequately irrigate. Without protest, so far as the record shows, the City of Walla Walla, Washington, went into the State of Oregon at the headwaters of Mill Creek, a tributary of the Walla Walla River, and secured for itself a dependable supply of water for domestic and culinary uses. While this water right is not in controversy, the fact of its development and use indicates that the State of Oregon had permitted water from the available supply to be taken, appropriated and used exclusively within the State of Washington. At the same time this use was being developed along the Mill Creek branch of the Walla Walla River, lands were being brought under cultivation along Mill Creek and its tributaries. Coincident with this development in the State of Washington farmers in the State of Oregon were applying the waters of the Oregon tributaries to irrigable lands in that state. The two developments were coincident. The City of Walla Walla was the largest community to grow out of the productivity of the combined area. The industries were largely centered there and the profits accruing from the interchange of raw materials for merchandise built up and developed that city. The record discloses no purpose, as this development proceeded, to devote water to lands which would be taxable only within one State or the

other. Both communities were more interested in the benefits accruing from the general development than from a competitive effort to develop one community against another.

Development in Oregon

The record does not disclose whether, at some time prior to the settlement of the Oregon area, the Little Walla Walla River or the Tum-a-lum River was the main channel through which the waters arising above the division of the Walla Walla River into the Little Walla Walla and the Tum-a-lum were carried north into Washington. Whatever the fact may be in that particular, it is apparent from the testimony that at least as early as 1880 the Tum-a-lum River carried the principal flow of the water north across the Washington line. All of the streams contributing to the Walla Walla River are supplied in the main from the snow falling during the winter period in the Blue Mountains. With the warmer temperatures of spring these snows are melted and the streams carrying off this water attain their highest stream flow. As the temperature is variable, so the stream flows are variable. They vary not only between the spring and the summer, but they vary from day to day and from month to month. Warm winds and sunshine give them a large supply and colder weather shrinks them. The summer rains covering 150 square miles of drainage area are gathered into these streams and augment their flow.

An agricultural community cannot develop and maintain itself upon sporadic supplies of water. The farmer must be able to place reasonable dependance upon the water supply if he shall make the expenditures and put forth the effort necessary to reap the harvest incident to the combination of the soil with the water. The evidence discloses that the bed of the Tum-a-lum River in Oregon, lying between the Nursery Bridge in the NE¼ of the NW¼ of

Section 1, Township 5 North, Range 35 East, and the McCoy Bridge on the line between Sections 24 and 25, Township 6 North, Range 35 East, varies in width from 150 to 1500 feet, and runs through cobble rocks underlain to great depths with gravel. The evidence does not disclose whether or not in this area of the river, during the low water period and prior to irrigation or diversions, there moved any substantial amount of surface water. It is conclusively shown, however, that this channel is an extremely wasteful channel. In order to avoid this waste and to make the waters of the Tum-a-lum River available for use within the State of Oregon the irrigators began as early as 1880 to put crude and temporary dams across the channel of the river at the Red Bridge in the SW¼ of the NE¼ of Section 12, Township 5 North, Range 35 East, and thereby and thereafter during periods of low water, diverted all of the waters of the Walla Walla River into the channel of the Little Walla Walla River, permitting to flow by said dam only that small quantity of water necessary to supply the right of the East Side ditch, which takes out of the river just below the dam. This action upon the part of Oregon irrigators, at least from 1880 until the date of the trial of this action, rendered the channel of the Tum-a-lum River, between the Nursery Bridge and the McCoy Bridge, dry. (Or. Abs. Froiseth, pp. 25, 26), Fee (id. pp. 40, 41), Alta Rogers (id. pp. 33, 34), Elba Rogers (id. p. 28), Charles Schwald (id. pp. 32, 33), Mason (id. p. 54), Burlingame (id. pp. 21, 22), Roeder (id. p. 41), Perry (id. p. 47). The evidence is uncontradicted that each year from 1880 to 1930, when the spring high water ceased, the irrigators within the State of Oregon continuously and without interruption and without protest, appropriated to their use all of the flow of the Walla Walla River arising above the Red Bridge.

Dr. Woodburn, a witness for the State of Washington, (R. p. 441) in discussing this question testified:

> "Q. And in the months of June, July and August the stream between the Nursery Bridge and the McCoy Bridge is naturally a falling stream, isn't it?
>
> A. No, it has already fallen. There is no water there.
>
> Q. And would you consider it an economical method of distribution of water to attempt to get 22 second feet down the Tum-a-lum Branch during June, July and August?
>
> A. Well, it isn't a good irrigation canal if that is what you mean. It is a natural stream bed, which is broad in spots, and the water would be somewhat dispersed. It is not an ideal irrigation canal by a long shot."

The use of the water in the State of Oregon was with the knowledge of many of the irrigators within the State of Washington. (Wash. Abs. pp. 41, 42, 52, 64, 67; Or. Abs. p. 121). The testimony shows that as early as 1891 there was being irrigated from the Walla Walla River, through the Little Walla Walla River, within the State of Oregon something more than 2200 acres of land. (Stip. No. 3). Whatever this amount of land was, the diversion of the water of the Walla Walla River at the Red Bridge was complete and continuous. The use may not have been as economical as modern irrigation methods, in a developed agricultural district, would dictate, but the fact remains that all of the water was taken and that it did not during the same period, return directly to the channel of the Walla Walla River through the Ford branch or the Crocket branch, which are the channels which would have conducted any excess diversion back into the main river. (Wash. Ex. 17, Or.

Abs. pp. 3, 7, 33, 34, 42, 48). The wastefulness of the channel of the Tum-a-lum River between the Nursery Bridge and the McCoy Bridge is illustrated by actual experiments set forth in the record. Orin Bowman, a witness called by the State of Oregon, (Or. Abs. 24), testified that he has had charge of distributing the water for the Hudson Bay Canal since 1920; that in 1928 there was turned over the dam at the Red Bridge 25 c.f.s. of water, and that after forty-eight hours this substantial quantity of water had not reached the McCoy Bridge. W. C. Mason, deputy water master on the Little Walla Walla River since 1923, (Or. Abs. pp. 54, 55) testified that on November 1, 1933, 21 c.f.s. was turned past the dam and 25 feet was turned down on November 2nd, the following day, and that the waters so turned ran, during the forty-eight hour period only one-half mile below the Nursery Bridge. Aubrey E. Perry, an irrigation engineer employed by Oregon, testified (Or. Abs. p. 48) that in 1928, 25 second feet was turned below the dam at the Red Bridge and that at the end of three or four days none of this water had reached the McCoy Bridge. Burlingame, a witness for the State of Oregon, testified as follows:

> "Q. Mr. Burlingame, the development there upon Gardena, was that largely completed at the time you left the company and got out of the company?
>
> A. Yes, sir.
>
> Q. And before the Gardena Farms District was organized?
>
> A. Yes, sir.
>
> Q. You left the company at the time the Gardena Farms District was organized, did you?
>
> A. No, sir.
>
> Q. Before that?
>
> A. Before that.
>
> Q. Can you tell us when?

A. I think it was in '30. I am not sure.

Q. In 1930?

A. Yes.

Q. And the development prior to that, had you had any water from Oregon during the short season—now, when I say "water from Oregon" I am referring to water that comes down the Tum-a-lum River—had you had any water down the Tum-a-lum River for the purpose of making any of that development there during the short season, the months of July and August and late June?

A. Only what runs under the bridge there and what comes through those spring branches that run to the headgate.

Q. Now, Mr. Burlingame, when you say what water runs under the bridge you refer to that that rises at the McCoy Bridge?

A. Yes.

Q. And when we refer to the springs you mean Big Spring and East Spring?

A. Yes.

Q. Or the East Prong, called the East Little Walla Walla in Washington, isn't it?

A. Yes, sir.

Q. And there is a McEvoy Spring Branch that runs in there too, is there not?

A. Well, there's numerous springs that head in above the headgate.

Q. Mr. Burlingame, do you know the first year that rights up Yellowhawk and up Mill Creek were shut off for the purpose of allowing the priority to Gardena?

A. I know it was done, but I can't remember the date.

Q. Was that done before or after you left the company do you recall?

A. I think it was done before."

Dr. Woodburn testified that in June, 1932, he and Mr. Humphrey were making a joint study of the stream and

that 20 c.f.s. of water passed the bridge but did not go across the dry area, but might have gone under it. (Wash. Abs. 142).

During the period when the channel of the Tum-a-lum River from the Nursery Bridge to the McCoy Bridge has been dry after the recession of the high water, the area lying two miles to the south of the Washington-Oregon State line has continued to produce a substantial amount of water available for the irrigation of Washington lands. Wash. Ex. 30, page 12, shows that in 1933, in July and August, when the channel of the Tum-a-lum River had been completely shut off at the Red Bridge, there was a flow across the state line into Washington of from 12 to 22 second feet of water.

The foregoing recitals impel two conclusions: First, that for more than fifty years last past, during the summer irrigation season, the Oregon irrigators have appropriated to themselves all of the flow of the Walla Walla River at the Red Bridge and permitted none of it to go on down to Washington users; and second, that to permit quantities of water to flow past the Red Bridge during the low water stages of the river is wasteful and uneconomic. During the period when Oregon was so diverting the water away from the Tum-a-lum River, and into the Little Walla Walla River, the State of Washington, as shown by the tabulation of the decrees of the states of Washington and Oregon (Or. Abs. 9) and the stipulations on file herein, has continuously increased its irrigated acreage at substantially the same rate that Oregon has increased its irrigated areas. (Or. Brief, p. 16).

THE GARDENA FILING

On the 24th day of July, 1891, J. T. Kirk, J. F. Boyer and W. F. Courtnay filed a notice of intention to appropriate 500 cubic feet per second of time "of the waters of the Walla Walla River now in said river at the place opposite where this notice is posted." (Stip. No. 5). Apparently this notice lapsed or was subject to lapse, because of failure to begin work within the period provided by the law of the State of Washington. Successive notices of intention to appropriate water from the Walla Walla River were thereafter filed in February, 1892, and in July, 1892. Almost immediately after the filing of these applications E. C. Burlingame organized and became the head of the Walla Walla Irrigation Company, which company succeeded to the above mentioned applications, and proceeded to make surveys, begin the construction of canals and ultimately to take water from the Walla Walla River for irrigation purposes. The original applications for the use of this water show that the lands to be irrigated lie within the State of Washington and the State of Oregon and include large areas of land unindentified except by township and range. (Stip. No. 5, Exs. "B", "C" and "D"). The main diversion canal took out of the Walla Walla River, as shown upon Washington's Ex. 17, at a point in the McBean Donation claim and below the point where Stone Creek, Yellowhawk Creek and the East Little Walla Walla River flow into the main channel of the Walla Walla River and continued westerly a distance of about twelve miles to a tract of some seven thousand acres of land delineated upon Wash. Ex. 17 as "Gardena Tracts." In 1928 an irrigation district was formed, under the Washington law, known as the Gardena Farms District, which district acquired all of the water rights of the Walla

Walla Irrigation Company. During the period between 1892 and 1928 there was expended upon this project, as set forth in Ex. "F" attached to Sitpulation No. 5, the sum of $227,078.65. This development resulted in the awarding by the Washington court, to said Walla Walla Irrigation Company and its successors, the Gardena Farms District, a water right on the Walla Walla River with a priority of 1892, but which priority had certain marked limitations. This certificate of water right was granted in an action entitled, "State of Washington, Plaintiff v. Charles Ackerson, et al, Defendants," filed in the Superior Court of the State of Washington for the County of Walla Walla. (Stip. No. 5, Ex. "A") (Wash. Ex. 11, page 69). This water right is set forth in the decree (Wash. Ex. 11, pp. 76 and 146) as follows:

> "'That claimant's 5,000 acres of land, which was the amount irrigated at the time of the hearing of the claim of said Walla Walla Irrigation Company before the referee, to wit: on the 29th day of March, 1926, is entitled to the use of water to the extent of 66.67 cu. ft. per second from April 1st to July 1st; 50 cu. ft. per second from July 1st to October 1st, and 1 cu. ft. per second for each 50 acres of land for winter irrigation; provided, that from and after said 29th day of March, 1926, the remaining lands susceptible to irrigation which may in the future be developed, shall be entitled to a quantity of water for irrigation at the rate herein allotted, as said lands may be brought into cultivation from time to time until a maximum of 7,000 acres are developed and the maximum of water herein awarded is used; and that the amount of land to which this claimant is entitled to water under the above provision shall be determined at the beginning of the spring irrigation season each year, by the State Supervisor of Hydraulics.'"

Paragraph 14 of the decree at page 146, provides:

> "'That a superior right on the Walla Walla river or any of its tributaries runs against all inferior rights on the tributary to which said right is attached as well as against all inferior rights on tributaries entering the stream above the point of diversion of such right except that prior class rights of the Walla Walla Irrigation Company will not run against inferior class rights on either Mill Creek or Garrison Creek by conveyance of water through Yellowhawk Creek, nor will the prior class rights of the Attalia Irrigation District run against inferior class rights for lands located in the Walla Walla valley. A superior right does not run against inferior rights on other tributaries that enter the stream below the point of diversion of said superior right.'"

On pages 72, 73, and 74 of that decree, under class 30, with 1892 priority, are claims Nos. 588, 590, 591, 592, 594, 611, 614, 615, 617, 624, 606, 607, 608, 609, 610 and 619 (a total of 1,095 acres), followed by a note on page 74 which refers to these proof numbers and says:

> "NOTE: By virtue of the decree in the case of the Lowden Company et al. v. The Walla Walla Irrigation Company, records of this court, all rights of the above named claimants in this class taking water from the Walla Walla river are prior to that of the Walla Walla Irrigation Company given in Class 30."

In Class 31, under priority of 1893, on pages 77, 78, 79 of that decree, are found proof numbers 593 and 599 for a total of 388.96 acres. And following them is a note which reads as follows:

> "NOTE: Under provisions of the decree in the case of the Lowden Company et al. v. The Walla

> Walla Irrigation Company, records of this court, all the above lands included in this class taking water from the Walla Walla river are entitled to a priority over the lands included in the claim of the Walla Walla Irrigation Company."

To this action the State of Oregon was not a party and no irrigator within the State of Oregon was a party.

The record shows that the development of the Gardena project beginning in 1892 was slow and intermittent. (Stip. No. 5). It was financed in two ways: First, by the effort of Mr. Burlingame, its head, and second, by the sale of stock. The evidence shows without dispute that from 1892 to the year 1930, there was no claim of right and no exercise of a right to have the Oregon irrigators, after the period when the flow of the stream had so receded that all of it was diverted to supply the Oregon requirements, turn water past the Red Bridge for use within the State of Washington.

Coincident with the development of Gardena, and after 1911, Burlingame, (Or. Abs. p. 21) the President and large owner of the Walla Walla Irrigation Company, was also interested in and operating another canal beginning at a point in the State of Oregon on the Tum-a-lum River below the Red Bridge. This development was the Hudson Bay Canal, which runs west from the point of diversion for a distance of substantially ten miles. The Hudson Bay right in the Oregon decrees is given a priority of 1903. It is based upon the right of the Hudson Bay Company to have the use, during the winter and early season, of the water of the Tum-a-lum River. The water if so used is in derogation of the right of the Walla Walla Irrigation Company to have water flow down the Tum-a-lum to supply the uses under the Gardena appropriation. At no time did the Walla

Walla Irrigation Company deny the right of the Hudson Bay Company to take into its canal the quantity of water decreed to it under the Oregon decrees. Mr. Burlingame was for a long period in charge of both companies at the same time. This conduct upon the part of Burlingame impels but one conclusion—that never at any time after the original appropriation of 1892 did the Walla Walla Irrigation Company rely upon or claim right to the use of the waters of the Walla Walla River above the Red Bridge. The Hudson Bay right is a secondary right. The record shows that upon the recession of the high waters, the Hudson Bay use is discontinued. (Wash. Ex. 27). In this connection it is further significant that during the period of high water the Washington users do not need to impinge upon the Oregon uses. (Barney, Wash. Abs. 36; Wash. Ex. 27, Wash. Ex. 18 p. 11 et seq., p. 120 et seq.).

The evidence shows that during the years 1929, 1930, 1931, 1932 and 1933 when the Washington Water Master began the regulation of water within the State of Washington and shut off Washington appropriators with priorities subsequent to 1892 the Hudson Bay Ditch was substantially dry and the Gardena Canal was still getting practically its decreed amount. In other words, when the Gardena project was short of water the Hudson Bay Company had been cut down to a point where its draft upon the river was negligible.

Bowman testified (R. p. 516) that in 1919 he went to work for the Milton-Freewater and Hudson Bay Irrigation Company; that in 1920 a headgate was constructed in the channel of the Tum-a-lum River under the direction of Carl Hartvedt, Superintendent of the Gardena project, which headgate was designed to divert the waters of the Tum-a-lum River into the Hudson Bay Canal. This of course was ample

notice of the intention of the Hudson Bay Company to take the water and that it was taken with the knowledge and consent of the Walla Walla Irrigation Company.

The high water in the Washington tributaries to the Walla Walla River during the period of flush flow was sufficient to supply the demands of all of the Washington users, and after the secondary rights on the Oregon side were all shut off, the Washington users were still unregulated and using such quantity of water as their necessities might dictate. (Barney, Wash. Abs. 36, Wash. Ex. 27, Wash. Ex. 18, p. 11 et seq., p. 120 et seq.). There can be no question but that through all the years from 1892 until 1930, Burlingame, President of the Walla Walla Irrigation Company, knew that when the waters receded from their spring flow, the Oregon users appropriated the entire stream. When, on the 24th of July, 1891, Mr. Kirk, Mr. Boyer and Mr. Courtnay posted their notice of intention to appropriate, the entire flow of the Walla Walla River in the State of Oregon above the Red Bridge had been diverted into the Little Walla Walla River and was not then passing the point where the notice was posted and never thereafter passed or flowed to that point of diversion during the months of late June, July and August. In 1930 we have evidence of the first claim upon the part of the State of Washington or its irrigators that the conduct of the State of Oregon, in the complete and exclusive use, during the summer season, of that part of the Walla Walla River flowing above the Red Bridge, is in derogation of the rights of Washington irrigators. Wash. Ex. 24, a telegram from the State Engineer of the State of Washington to the State Engineer of Oregon, reads as follows:

"April 23, 1930.

Rhe Luper, State Engineer
Salem, Oregon

Just advised entire Walla Walla River being diverted at Freewater.

Charles J. Bartholet."

On the same day a telegram, Wash. Ex. 25, was sent as follows:

"Rhea Luper
Salem, Oregon

Will you take steps to enforce a more economic use of water from Walla Walla River in Milton and Freewater sections or cause a regulation which will give Washington water users waters to which they claim they are entitled Stop Complaint comes from Water Master and Walla Walla Irrigation District.

Charles J. Bartholet."

To this the State Engineer of the State of Oregon replied on April 24, 1930, Wash. Ex. 26:

"Believe it has always been customary to divert in Oregon the entire flow of the Walla Walla River. After such diversion, return seepage has supplied the Washington side. We have no authority without court order or compact to recognize rights outside of State.

Rhea Luper, State Engineer."

It is significant that as late as 1930 the State Engineer of the State of Washington, in charge in that state of the distribution of waters, and particularly of the Gardena Farms District, should wire to the State of Oregon, not to claim a priority for the Gardena lands, but to insist upon a more economic use of the waters by the irrigators within the State of Oregon. (Barney, Wash. Abs. 39).

When on April 23, 1930, the first of the above telegrams was sent, the Gardena Canal had been receiving since April 1, 116 c.f.s. of water under a decree allowing it but 66.67 c.f.s. during this period, and on April 22nd, the day before that telegram was sent, the amount of water the Gardena Canal was receiving had been reduced to 68 c.f.s., an amount still near its decreed right. (Barney, Wash. Abs. 39, Wash. Ex. 18, p. 21). In 1930 the Washington water master, Barney, did not begin to regulate Washington users until June 10th and did not close all rights with priorities subsequent to 1892 until July 6th. (Wash. Ex. 27).

Notwithstanding the fact that the State of Washington now contends that at all times the State of Oregon has diverted waters from the Walla Walla River to which its users, and particularly the Walla Walla Irrigation Company, were entitled, the Walla Walla Irrigation Company, needing additional water, spent during the years 1910, 1911 and 1912, the sum of $56,451.18 to secure sewage water from the City of Walla Walla for the irrigation of its lands, and during the years 1905, 1909, 1910, 1913, 1914 and 1925 spent approximately $10,000 in drilling wells in search of a new water supply. So far as the evidence shows, during all of this period until 1930, on no occasion did the State of Washington or any of its irrigators assert a claim to, or make an effort to secure, the use of waters arising above the Red Bridge during the low water period.

Paragraph II of Stipulation No. 3 indicates that the rights of the Milton-Freewater and Hudson Bay Company and of the Gardena project have been recognized as inadequate for summer irrigation. Each Company has resorted to winter irrigation in order to provide against summer

water shortage. The Washington court decreed to Gardena a winter irrigation right of fifty second feet of water. This practice must result from the fact that other claimants have exercised the right to the prior use of the water during the irrigation season.

In 1891 the law of the State of Washington controlling the appropriation of waters contained the following provisions:

> "'(2) Notice of Appropriation. Any person, persons, corporation or association desiring to appropriate water must post a notice in writing in a conspicuous place at the point of intended storage or diversion, stating therein: (1) That such appropriator claims the water there lying, being or flowing to the extent of one cubic foot of water per second of time, or some multiple or some fractional portion thereof; (2) The purpose for which said water is appropriated and the place or places, as near as may be, of intended use; (3) the means by which it is intended to store or divert the same; (4) a copy of the notice must, within ten days after it is posted, be filed for record in the office of the county auditor of the county in which it is posted. (L. 1891, p. 327, Sec. 2; Rem.—Bal., Sec. 6317.)
>
> "'(3) Construction of Works, When to Begin. If said use is by storage, the appropriator must, within three months after the notice is posted, commence the construction of the works by which it is intended to store the same. If said use is by diversion, the appropriator must, within six months after the notice is posted, commence the excavation or construction of the works by which it is intended to divert the same; *it being herein expressly provided that such works must be diligently and continuously prosecuted to completion, unless temporarily interrupted by the elements.* (L. 1891, p. 328, Sec. 3; Rem.—Bal., Sec. 6318.)

"'(4) Vested Right—Forfeiture by Non-Compliance. '*By a strict compliance with the above rules,* the appropriator's right to the use of the water actually stored or diverted relates back to the time the notice was posted; but *a failure to comply therewith deprives the appropriator of the right to the use of the water* as against a subsequent appropriator who faithfully complies with the same. (L. 1891, p. 328, Sec. 4; Rem.—Bal., Sec. 6319.)'"

As shown by Ex. No. 5, in 1898 the Walla Walla Irrigation Company began the sale of stock entitling the holder to the use of water and continued the sale of such stock until the year 1930. This stock entitled its owner to a pro rata share of the water belonging to the Company. During the entire period no water user was delivered any water arising on the Oregon side above the Red Bridge when the water so arising was necessary to meet the requirements of Oregon users. Instead of resorting to their claim against Oregon, the Company first secured the right to the use of the sewage water of the City of Walla Walla and then undertook to increase its water supply by the drilling of wells.

In 1917 the Public Service Commission of the State of Washington appointed Hartvedt to take charge in their behalf of the Walla Walla Irrigation project. (Wash. Abs. page 69). At that time water stock had been issued for 2245 acres of land. (Wash. Abs. 70). This stock so issued was given a preferential right, and called Class "A" stock. Stock thereafter issued was denominated Class "B" stock, and such Class "B" stock had a right secondary to Class "A" stock. This action of the State of Washington, through one of its instrumentalities, is significant. Without calling for water from the State of Oregon it then recognized an inadequate right for this project—a high water or flood

right as to all lands in excess of 2245 acres. (Wash. Abs. page 70).

This conduct seems entirely inconsistent with the present claim made by the plaintiff state. The complaint in this case alleges and by stipulation it is agreed, that during the past eight or ten years there has been a marked shortage of water in the Walla Walla River and its tributaries. With the failure of the sewage supply and the failure of the wells to produce and the shortage of the water in the water shed generally, the State of Washington, for the first time in 1930 made its demand upon the State of Oregon for an economical use of waters within that state.

A water right is finally perfected and fixed by the application of the water sought to be appropriated to a beneficial use. The following cases and texts set forth the law upon this subject:

In re Water Rights in Silvies River, 237 Pac. (Or.) 322, 336.

> "As a general rule, to constitute a valid appropriation of water, three elements must exist: (1) An intent to apply it to a beneficial use, existing at the time or contemplated in the future; (2) a diversion from the natural channel by means of a ditch, canal, or other structure; and (3) an application of it within a reasonable time to some useful industry."

Sowards v. *Meagher*, 108 Pac. (Ut.) 1112, 1116:

> "The three principal elements to constitute a valid appropriation of water, and, as stated by the court in the case of Low v. Rizor, 25 Or. 557, 37 Pac. 82, and approved by the same court in the case of the Nevada Ditch Co. v. Bennett, 30 Or. 59, 45 Pac. 472, 60 Am. St. Rep. 777, are: '(1) An intent to apply it to some beneficial use; (2) a diversion from the natural channel by means of a ditch, canal,

or other structure, and (3) an application of it within a reasonable time to some useful industry.'"

Continuing in this case, the court uses this language: (p. 1117):

> "Whatever else is required to be or is done, until the actual application of the water is made for a beneficial purpose, no valid appropriation has been effected. This was so before the statute, and it is still so under the statute. The filing of the application with the state engineer, as required by the statute does not establish an appropriation of water. It but takes the place of, and is, the preliminary notice of intention to appropriate. Unless the construction of the works are commenced and completed within the time allowed by the engineer, and the water diverted and applied to the beneficial purpose of the proposed appropriation the filing of the application is for naught, and no completed valid appropriation has been made."

Sander v. *Bull*, 135 Pac. (Wash.) 489, 491:

> "Appropriation of water consists in an intention to appropriate followed by reasonable diligence in applying the water to a beneficial use."

In re Water Rights in Alpowa Creek, etc., 224 Pac. (Wash.) 29, 31:

> "An appropriation of water consists of an intention to appropriate followed by a reasonable diligence in applying the water to a beneficial use."

Kendall v. *Joyce*, 93 Pac. (Wash.) 1091.

In this case the court holds that one who, at a time when the law did not authorize it, filed a notice with the auditor of the county reciting that he claimed 500 inches of water from a stream at a certain point and an additional

500 inches at a certain other point, but did not divert the water and apply the same to beneficial use within a reasonable time, acquired no rights.

Wrathall v. *Johnson,* 40 Pac. (2d) (Ut.) 755, 783:

> "Essential to the appropriation is that of use. An appropriation is the act of turning, setting aside, taking possession of, or applying to a particular use a definitely ascertained quantity of water to a particular and beneficial purpose."

67 C. J. page 982:

> "The right initiated by notice is an inchoate right until perfected. This inchoate right may be lost by failure to perfect or by abandonment."

Wiel's Water Rights in the Western States, Third Edition, Vol. 1, page 406:

> "Sec. 376. NOTICE ALONE NOT ENOUGH.—It need hardly be said that merely posting a notice is not enough unless the other requisites of a bona fide intent, diligence and completion, are also complied with. It is well settled that the posting of a notice gives no rights if the other requisites are not complied with."

Id. P. 430:

> "* * * and this has been followed generally in the desert States and became the accepted form of statement, viz., that there can be no appropriation until the actual use is made.'

Note, P. 430:

> " 'The final step, and the most essential element, to constitute a completed valid appropriation of water, is the application of it to a beneficial purpose. Whatever else is required to be or is done, until the actual

> application of the water is made for a beneficial purpose, no valid appropriation has been effected.' Sowards v. Meagher (Utah, 1910), 108 Pac. 1113. Hagerman Co. v. McMurray (N. M.), 113 Pac. 823."

During the period after the recession of the high waters in the tributaries of the Walla Walla River, none of the waters arising above the Red Bridge were ever applied to a beneficial use within the State of Washington. The record further shows, as herein elsewhere cited, that quantities of water as much as 25 second feet, half of the Gardena right after July 1st, turned over the dam at the Red Bridge completely sank into the river bed. There is no convincing evidence that water so sinking is again available for use to the Washington appropriators. There is no showing in this case that the diversion of the water at the Red Bridge and its application to the irrigation of lands adjacent to the river is more detrimental to the users within the state of Washington than to have the same amount of water turned past the Red Bridge to sink into the channel of the Tum-a-lum River between there and the McCoy Bridge.

The testimony of witness Piper, who, for the parties hereto made a study of the subject of underground water, would indicate that the use of the water on the lands to the west of the Tum-a-lum River does not remove the return water materially more to the west than would occur if the waters were permitted to sink in the channel of the Tum-a-lum River. (Or. Abs. pp. 74, 75).

In the case of *U. S.* v. *Haga*, 276 Fed. 41, Judge Dietrich had before him a controversy between an appropriator on a tributary and a prior appropriator on the main stream. The facts in the case are analogous to the facts in this case. In that action the court sets forth the following conclusion:

"(1) While, as already stated, the creek is constructively a tributary of the river, there is no showing that naturally, during the irrigation season, it actually makes any contribution to the river flow. There is a continuous channel, it is true, and there are doubtless short periods of unusual run-off in extraordinary seasons when there is a discharge into the river; but the showing is insufficient to warrant a holding that the older diversions from the river have any substantial beneficial interest in the creek. An appropriator from a main channel can complain of a diversion from a 'tributary' only if and when such tributary would, if not interfered with, make a valuable contribution to the main stream.

"(2) In the second place, there is no warrant for finding that in normal seasons there is any natural flow in the creek later than June 1st, whereas up to about July 1st, and sometimes to a later date, there is an abundance of water in Boise river proper for the supplying of all rights therein, and hence the use of the creek by the defendant infringes no appropriator's right. It follows that plaintiff is not in any way injured by the defendant's diversion of the natural flow of the stream."

The Washington court in fixing the limitations upon the Gardena right must have proceeded upon the same theory as that adopted by Judge Dietrich. It will be observed in the decree that the Gardena right is given a priority of 1892, except that certain users with priorities subsequent to 1892 were made prior in right to the Gardena right. In this case the Walla Walla River above the Red Bridge contributes nothing to the main stream of the Walla Walla River after the stream has so receded that the flow of the river at the Red Bridge is required for Oregon irrigators. This condition has persisted since 1880.

The record in this case is without dispute that from

1892 until the date of the trial of this case those claiming the right to irrigate the Gardena tract have not applied any of the waters of the Walla Walla River, arising above the Red Bridge, during the low water period, to the irrigation of their lands, and that during the high water season their rights have been adequately supplied by the Washington tributaries.

The Gardena Farms District right is the only substantial right in the State of Washington which diverts water directly from the Walla Walla River. Other Washington rights are along the spring branches which rise on the Oregon side. These are the water sources referred to by Dr. Woodburn in his testimony as accruing at the margin of the gravel fan where the water table intersects the surface. They rise and fall with the river and with irrigation. They are outlets of underground water. All of the evidence in the record upon the subject shows that Oregon has, to the extent that it has required them, used these small spring branches to irrigate the adjacent lands and has maintained tight dams across them. (Or. Abs. 27, 31, 34, 41, 48, 55.) The Washington court found in 1928 in the Ackermann case, in which case the Washington rights to the use of the waters of the Walla Walla River were adjudicated, that the use of water on the Oregon side is a benefit and not a detriment to Washington users. (Wash. Ex. 11, p. 4, of Referee's Report.) The language of the referee in that case, as adopted by the court, is:

> "The many springs which are involved in this case are fed by water which is applied to lands along upper Mill creek and along the Walla Walla river on the Oregon side of the state boundary line. The early use of such water when the supply is usually abundant serves a double purpose, as a large percentage of it returns to the streams and becomes available

for use on lower lands later in the irrigation season thereby greatly increasing the acreage which can be irrigated from the available water supply."

The doctrine of estoppel may be material as fixing the intention of the Washington appropriators. It is conclusively shown that the Washington users never have had the use of the water for which they now contend, therefore they could not have abandoned such right of use. If the doctrine of abandonment were to be invoked in this case it would have to be applied to the right to perfect an appropriation. In order to so apply the doctrine of abandonment it would be necessary first to find that the appropriators in 1901 and 1902, when they posted their notices of intention, and thereafter while they were constructing their canals, had the purpose to take and use the water then being diverted in Oregon and, under the law and with due diligence to apply the same to beneficial use within the State of Washington. Such intention is not shown by the evidence or the conduct of the claimants.

WATER USES WITHIN THE STATE OF OREGON

It is contended by the State of Washington that the water diverted by Oregon from the Walla Walla River is wastefully used. The water rights within the State of Oregon have all been the subject of adjudication by the Oregon courts. (Or. Decrees, Wash. Exs. 1 to 9, inclusive). In these decrees the court has fixed not only the priorities of use, but in order to make the relative priorities available has also fixed and limited the quantities of water to be used during the irrigation season under the different rights. The Youngs Soil Map (Wash. Ex. 15), a joint soil survey, sets forth a classification of the soils irrigated in both states.

The witnesses of both parties, in fixing water requirements, address themselves to the soil conditions as found by Youngs.

For the purpose of determining whether or not the amount of water decreed to the users under the Oregon decree is a proper allowance, Ed. K. Humphreys, an engineer employed by the State of Oregon, selected a series of typical farms on the varying soils in the Oregon area, as shown upon the Youngs map, put in measuring devices and proceeded, during the irrigation season of 1933, to supply what was considered an adequate amount of water for the irrigation of each particular piece of such land. The losses in transit were measured, the amount of water was measured, the land was measured, the crop conditions were observed, and from the data so obtained the water requirements under the existing conditions as to each tract of land were deduced. (Humphreys, Or. Abs. pp. 85, 86; Humphreys, R. 867).

Quantities of water applied were substantially the amounts allowed by the Oregon decrees. (Or. Abs. 85.) Each of the farmers upon the test places testified that the quantity of water delivered, where available through the irrigation season, was a quantity of water necessary to the proper irrigation of the lands involved. (Warren Roeder, Or. Abs. 41; C. E. Herr, Or. Abs. 62; George Knopf, Or. Abs. 61; C. J. Karker, Or. Abs. 76; D. H. Babcock, Or. Abs. 77; Charles Eiffert, Or. Abs. 79; Clifford B. Harris, Or. Abs. 82; Lloyd Bookout, Or. Abs. 82; W. H. P. Herman, Or. Abs. 83.) Taking eight of the test places, the average use of water during July was 2.52 acre feet per acre. During August it was 2.09 acre feet per acre, making a mean flow for the months of July and August of 2.3 acre feet per acre, which, converted into a continuous flow, amounts to 1.49 miner's inches per acre. Exhibit 41, introduced by Oregon,

is a compilation of the data gathered upon the test farms used during the year 1933. The results set forth in this exhibit are a record of the actual application of water to lands within the Oregon area by practical, experienced farmers. Their testimony sets forth both the results of such application and the result which, in their opinion, would have followed from the application of a lesser quantity of water. Humphreys, an engineer of broad experience, testified that in connection with his investigation he made a study of the irrigation system in the State of Oregon, including the diversion works and measuring devices; that he found the diversion works and measuring devices better, on an average, than those in other districts where conditions are similar and that during the irrigation season he saw no evidence of waste of water. (Or. Abs. 90.)

S. T. HARDING, Professor of Irrigation at the University of California, was called as a witness for the State of Oregon. (Wash. Abs. 242; Or. Abs. 110). Harding is an irrigation engineer of extensive experience and broad education. He made a study of the Youngs soil map and went upon the ground and made observation of the soil for the purpose of determining its structure and water requirements. He examined the Oregon decrees as to their water allowances to the tracts used by Humphreys as test places. He made an examination of the soil, a general examination of the water supply, the reports of the stream flow and the evidence as to underground water. He observed the methods of irrigation in the State of Oregon and reviewed the testimony of the witnesses as to practice followed during the irrigation season, examined the root systems of the vegetation, the trees growing upon the ground, compared the conditions with many others with which he is familiar, and then

expressed his opinion that the practices, considering all of the local conditions, are representative of reasonable, standard practice and a reasonable use of water; that the irrigation structures in use represent the normal or usual type for conditions such as are found in the area in question. The witness took into consideration the fact that the water available for use upon the Oregon areas is the varying flow of a mountain stream and not from storage where the supply is available upon demand. He stated that the acreage which can be given full service from the direct flow of the stream is limited to the area which can be supplied during the period of maximum demand, which would be the months of July and August.

The witness stated that on most streams supplied by melting snow or ground seepage of the drained area which comes from melting snow, the maximum crop demand comes in a period of minimum stream flow. In determining the duty of water the frequency of irrigation required is of primary importance. The annual amount of water an irrigator needs is fixed by the amount with which he can cover his land at each irrigation and the frequency with which he has to irrigate. Frequency of irrigation required is ordinarily fixed by the practice and experience of those actually irrigating the crop. The land owner may not be familiar with the methods of measuring water so as to determine or know the quantity of water which he uses, but experience shows that actual irrigators can and do know the frequency with which it is necessary to irrigate for different crops, and that water requirements can be built up from that frequency and the required amount to be applied at each irrigation. (R. 1059, 1060.) The irrigator is in the best position to determine any crop injury from too long delay between irrigations and has a more constant

contact than is otherwise obtainable with the soil and crop conditions.

Harding found that the average size (7 acres) of a farm upon which the support of a family depends in Oregon is comparable to the highly developed citrus areas in California. He concluded that the amount of water allowed by the Oregon decrees, one and one-half inches per acre continuous flow, is reasonable for a larger part of the gravel cone. He testified that within that area one could probably find small areas where the land could be handled on a somewhat smaller allowance, but that such areas are so scattered and their extent is such that it is not feasible to distinguish them in the allowance of water. In conclusion he stated, as his opinion, that the maximum allowance in the Oregon decree is a measure of the requirements of the main portion of the land within the area and that a decree applying any uniform rate to a large area should have an allowance liberal enough to cover the requirement of the main portion of the coarser types of soil. (R. 1084.)

DR. WILBUR L. POWERS was called as a witness for the State of Oregon. (Or. Abs. 103.) Dr. Powers is a soil scientist connected with the State College of Oregon and during twenty-seven years has had a broad experience in soil classification, water requirement work, irrigation practice and experimental work. Dr. Powers' qualification and standing in his field cannot be questioned. He has had familiarity with the area here involved since 1914 and during two years before the trial of this case gave intensive study to the irrigation problems here under investigation. Dr. Powers' study is highly technical but detailed. He went upon the lands, dug pits, analyzed soil, examined root conditions of the plants and from such examination and his

training and experience made his deductions as to the water requirements of the soils. He used in this connection the soil map prepared by Youngs (Wash. Ex. 15), and other scientific studies. In his testimony he shows the economic effect upon commercial crops of an insufficient supply of water. After examining the soils and their water holding capacity, he concluded that the No. 3 lands, as classified on the soil map, require about five inches per application of water for proper irrigation, and that to adequately irrigate and mature crops upon such land there is required a continuous flow of 1½ miner's inches per acre during the critical months, which months are the growing period of the vegetation and, more particularly, the last forty days before the maturity of the crop. In this connection Dr. Powers found that the No. 3 lands on Mill Creek within the State of Washington should have about the same water requirement as the No. 3 lands around Milton and Freewater.

It is significant at this point to observe that notwithstanding the existence of the No. 3 lands along Mill Creek within the State of Washington the State of Washington called no practical irrigators to show that in their experience upon the Mill Creek lands a lesser quantity of water than that claimed by the State of Oregon for similar lands is sufficient for the proper irrigation and maturity of crops.

Dr. Powers admitted that 1½ miner's inches of continuous flow for the irrigation of an acre of land is an unusual amount of water, but stated that the soil here involved is also an unusual soil. He testified that this soil is unusual because of its limited usable water holding capacity; because of the fact that there is no ground water within such distance from the surface as will help meet the situation for the roots, and because of the further fact of a relatively long, hot growing season and intensive farming.

GEORGE H. CARTER of Boise, Idaho, (Wash. Abs. 247; Or. Abs. 132) a civil engineer engaged almost exclusively in irrigation engineering, testified for the State of Oregon. Since 1913, Carter has been actively engaged in the administration of large irrigation projects, stream measurement, hydrographic work, and from 1921 until 1931, was Director of Water Resource and Commissioner of Reclamation of the State of Idaho. While employed in the latter position Carter was required to study irrigation districts, water uses and to supervise about seventy-five water masters in the State of Idaho. His testimony shows that in this work he came in direct contact with the problem of the application of water to nearly every kind and character of soil. (Or. Abs. 132.) The witness pointed out the similarity of climatic and soil conditions existing in the territory in controversy in this case with conditions prevailing in the State of Idaho. He went over the Oregon area in detail. He found that the irrigation practices in the Oregon area are quite in conformity with methods and systems used in other places with which he is familiar, and that the method of distribution of water in Oregon is common and well accepted. He expressed his opinion, from his study, that the method of distribution of water, taking into consideration soil conditions, stream conditions and water supply, is an efficient distributing system under the conditions and circumstances existing. He stated, "It is a very good distribution system and conforms well to the average practice. It is possibly better than a material number of distributing systems throughout the country." He examined the data and took into consideration the claimed necessity for irrigation frequency of once a week for orchards and twice a week for tomatoes and short-rooted crops, and concluded that the amount of water applied within the State of Oregon is not

more than could reasonably be expected to keep the crops in satisfactory growing condition; that the frequency of irrigation and the irrigation practice in Oregon is a reasonable and beneficial use of water. The witness expressed the opinion that a minimum application of water in one irrigation of the lands in question is between five and six inches and that this is a minimum amount for each application under average farm conditions. Taking the minimum of five or six inches per application, the frequency of application required will determine the amount of water necessary to be applied during the irrigation season. He visited the test places and studied the record of the use of water upon these places as set forth in Oregon Exhibit No. 42. He examined the farming practices and found them good. He examined the irrigation appliances and the distribution facilities and pronounced them all that might be expected under general economic conditions and found nothing out of line with good irrigation practices. He characterized the nine test places as representative of the Oregon area and stated that the farmers upon these places were a good class of farmer. He stated in conclusion, after having found that the test farms had received an average during the irrigation season of 1933, where water was available, of 1.49 miner's inches per acre continuous flow, that he considered that delivery efficient under an attempt to deliver 1½ miner's inches per acre, and, from all the calculations and observations he was able to make, that 1½ miner's inches per acre represents the minimum amount under which these farms may successfully carry on farming in the gravel area. The witness examined the Oregon decrees and gave his opinion, that the water requirement fixed by the Oregon decree is the necessary requirement for the irrigation of the lands covered by the decree and is a reasonable requirement and

an amount of water which these farmers must have in order to pursue their farming operations successfully and profitably. (R. 1112.) The witness further testified:

"It has been my general observation with irrigation projects that the general prosperity of the project is quite largely reflected by the available water supply. In other words, you may consider any irrigation project in comparison with others and the water supply will be a very close indication or measure of that project's prosperity. Land values will diminish in proportion to the available water supply, which of course fixes the crop production, so that eventually if a water supply is spread out too thin and a man's farm is spread out over too much area and not enough production per acre he comes to the point where his taxes and his overhead and cost of farming and things of that character will exceed his return." (R. 1113, Or. Abs. 137).

"Q. Would it be feasible and practical for a stream flow as this stream is to make a limitation upon a uniform basis in acre feet for each month?

A. No, I think the limitation must be based upon the available supply in the critical months. If I understand your question, it would not be permissible nor of any value to take the stream flow for the entire irrigation period six or seven months, and average it up and say that that is the amount that could be applied beneficially each month, so that does not follow." (R. 1116.)

"Q. To what extent is that determinative of your judgment in that regard?

A. Well, the use record, in my opinion, is of considerably more value than any other information at hand. It has been my experience with irrigation farmers, where they are working under conditions of limited water supply and are attempting and succeeding in applying reasonable methods, that their conclusion or ideas as to the amount of water available during a season are the most reliable guide. I

think there is probably a tendency on one side to approach a theoretical minimum, which may be opposed on the other side by poor or haphazard irrigation farming or just use of water. The problem as I see it is to reach a reasonable meeting ground between these two extremes. At least that is the theory that I have pursued in my irrigation work.

Q. And in the fixing of your duty of water for number 3 soils in the district there, including the 2-B, at an inch and a half per acre, you feel that that is a reasonable meeting point between those two extremes for this district?

A. Yes, sir." (R. 1117-1118.)

Upon cross-examination Carter testified that the stream system here is used by a great many diversions made by the farmers without any heavy expense in canal or diversion works; that he does not believe that anything economically feasible could be done to improve the present distribution system; that it seemed to be above the average in its present state, and that it is pretty well controlled with nothing but earthen ditches.

DR. JAMES G. WOODBURN testified as an expert witness for the State of Washington. (Wash. Abs. pp. 70-154.) Dr. Woodburn is a man of broad technical education as a hydraulic engineer. He first came to the Walla Walla project in June, 1932, for the purpose of making engineering studies, and between that time and the date of his testimony spent a large amount of time in making detailed studies of stream flows, water distributions, available water supply and other related questions involved in the use and the availability for use of the waters of the Walla Walla River stream system. He testified that the Walla Walla River and Mill Creek are fed during the low water season almost entirely from ground water because of the scarcity of rain-

fall during the summer season. Both Mill Creek and the Walla Walla River flow across broad alluvial fans. Around the lower fringes of these fans, in addition to the streams themselves, there are many natural gravity springs which drain the water from the alluvial fans and turn it into the Walla Walla River. The water emerging from the Mill Creek fan comes out in such way that it can be used for irrigation only on the lower lands of the project and is not available for use upon the areas here in controversy. The water emerging from the Walla Walla River fan in Oregon can partly be used on the lands in question, but that part of the water which emerges from the fan on its western end is, like that emerging from the Mill Creek fan, too far west to be available for use. Only that part of the water coming from the springs on the eastern part of the Walla Walla River fan can be used on lands having rights on the Walla Walla River. There have always been springs around the fringes of the delta of both Mill Creek and the Walla Walla River. The flow of these springs varies directly with the flow of the Walla Walla River, which is dependent upon the precipitation in the mountains to some extent, and particularly upon the winter snowfall. Any change in the regimen of the flow of either Mill Creek or the Walla Walla River, particularly the latter, which creates less water on the eastern part of the alluvial fan and removes it to the west, diverts water past intakes in Washington which supply rights on the Walla Walla River. Walla Walla City diverts its water into a pipeline in Oregon and conducts it thence to a reservoir shown on Washington Exhibit 17, from which reservoir the water is distributed for use within the City. The unused part of said water supply is returned to Mill Creek above the mouth of Yellowhawk Creek. Dr. Woodburn described the north and south forks of the Walla

Walla River in Oregon, their course through the canyon and their emergence into the valley. He pointed out the diversions as they are taken out, beginning with the first upstream diversion, then continuing on down the stream. After a detailed description of the river system with its varying channels and capacities he took up the question of the available supply of water in the Walla Walla River during the summer or irrigation season. He found that from about the year 1903 gauging stations have been maintained on the Walla Walla River, but that because of reasons, which he stated, the dependable data are covered by the sixteen years from 1918 until 1933, which period of measurement includes variable years of high and low water flow. With these and other measurements of inflow, and measurements and computation of transportation losses, Dr. Woodburn reconstructed the river and its tributaries into an available water supply for the irrigation season for the purpose of applying such supply to the water requirements of the lands within the correlated area. He took the Oregon decrees with their designated acreages and their water allowances and testified that in the month of July, 1933, through certain ditches, there was a 25.1 per cent over-diversion, and in August, 1933, there was a 14.7 per cent over-diversion.

These over-diversions are deduced in the data set forth in Washington Ex. 30. These data are examined by Oregon in connection with decreed acreage, and allowance made for transportation loss in the natural channels through which the water is conveyed after diversion from the river.

Oregon's conclusions are set forth in Oregon Ex. 44. This compilation shows that instead of an over-diversion, as found by Dr. Woodburn, there was an under-diversion of 4.5 c. f. s. Dr. Woodburn then proceeded through the

entire irrigation system for the purpose of showing what in his opinion would be the amount of water necessary to supply the rights as fixed by the Oregon decree. Having fixed the water supply and the acreage, he proceeded to show what would happen if the Walla Walla River area, including Mill Creek, should be administered, regardless of state line, and rights closed off in their respective priorities on all streams in the related system.

Since the rate of use of water affects not only the amount of surplus, but also the extent of its distribution, the witness assumed three different rates of use in Oregon in his computations: (1) The maximum rate specified by decree, which, because of minimum amounts allowed small tracts and because of one large stock-water and domestic right, averages somewhat more than 1½ miner's inches per acre; (2) 1¼ miner's inches per acre, a rate of use amounting to 1-⅞ acre feet per acre per month, which, if applied through the two months of July and August would amount to 2/5 of the seasonal total of about 9½ acre feet per acre; (3) 1 miner's inch per acre, a rate of use amounting to 1½ acre feet per acre per month, or a total depth of water of 10½ feet if used continuously at that rate through a seven-months season. (R. 362, 363; Wash. Ex. 30; Wash. Abs. 109).

The rate of use in Washington was assumed to be one c.f.s. to one hundred acres, or .4 miner's inch per acre. The witness then took the Washington and Oregon decrees and correlated the priorities in the two states and set forth in Table 4, Exhibit 30, what would result if all Oregon rights subsequent to 1892 were closed and the surplus accruing under the different bases distributed, first, to make up the shortage in Gardena and the amount remaining to Washington and Oregon rights with priorities subsequent to 1892.

The effect of these computations is to decrease the amount of water heretofore applied in the State of Oregon, to close off all Oregon rights accruing after 1892 whenever there is not a sufficient quantity of water in the entire system to fill all Washington rights with priorities up to 1892; to add materially to the available supply for the Gardena project and to extend the period when water would be available for irrigation under priorities later than 1892.

The witness testified (Wash. Abs. 123) that there are nearly three hundred wells in the Milton-Freewater vicinity, as indicated upon Washington Exhibit No. 17. A joint survey was made by the two states in September, 1932, for the purpose of locating and obtaining measurements of the well flow, the size of pumping equipment and the size and depth of wells, and the record of electricity consumed. From such survey and data it was indicated that during the irrigation season of 1932 a total of 9,010 acre feet of water was pumped for use on the Milton-Freewater area.

In cross-examination the witness testified that he had never had charge of the distribution of water in any part of the country and had had no experience in the irrigation of lands. The witness testified (Wash. Abs. 130) that from the beginning the large amount of irrigation has been west of the Tum-a-lum River and that the development of the country to the west of that river requires the diversion of the water away from the stream. The witness, in his computaions of available water, used three typical years, the year 1931—a year of minimum flow, the year 1932—a year of less than average flow, and the year 1933—a year of slightly greater than average flow. The Tum-a-lum River, during July and August, had not been dry every time he had visited it between the Nursery Bridge and the McCoy Bridge. (Wash. Ab. 144). At times there was water

flowing for several hundred yards below the Nursery Bridge and usually there had been water for some distance above the McCoy Bridge, leaving a distance of approximately one half mile that would be dry between those bridges. In 1933, with a flow past the Nursery Bridge of 19, 21 and 25 second feet, for three succesive days, there was a space in the river channel in which there was no flow, but there was a slight rise at the state highway. The witness testified that he could not say how much water would have to be turned down at the Nursery Bridge in July of any year in order to reach the lower rights on the Walla Walla, but that 22 second feet would go through eventually. In June, 1932, while Humphrey and the witness were making a study of this area, 20 c. f. s. did not get through, but there was flow at the state line continuously. The water that was turned down at the Nursery Bridge did not get over the dry spot as a surface flow; it might have gone under it. The stream from the McCoy Bridge down is a gaining stream; that is true whether or not water is going over the spillway at the Nursery Bridge. (Wash. Abs. 144). In June, July and August the stream between the Nursery Bridge and the McCoy Bridge is not a falling stream, it has already fallen. There is no water there. The attempt to get 22 c.f.s. down the Tum-a-lum during June, July and August would to some extent be wasteful and, to the extent of the waste, would not be economical. It would not be as economical as a really good irrigation canal. (Wash. Abs. 145). The indications, from the data, are that most of that water entering the upper end of the Tum-a-lum at the Nursery Bridge would show up in the stream channel by the time the state highway bridge in Washington is reached. There may be some loss in that reach which enters the underground reservoir but it does not show gravity outlets in the Big Spring

branch or branches along the Tum-a-lum, and possibly further west in the East Prong. (Wash. Abs. 146). The theory of distribution assumed by the witness would not compel an entire change of the present Oregon method of distribution. It would involve some change and improvement. Of course, with rights subsequent to 1892, it would involve a radical change. On rights prior to 1893 it would not involve a radical change, though it might involve some change. It would not compel a complete lining of the conduit through which the water would be conducted to get it down to the lower Walla Walla without loss. Whether the witness, as an engineer, would recommend the construction of such a project, based upon the amount of information in his possession, was not a requirement. "If I were starting out with no irrigation in this valley, I would redesign the system entirely at the start because it has just grown up. Such facts as I have here I believe would warrant certain changes." (Wash. Abs. 148). The witness then took the published schedules of the companies furnishing electricity to the pumps and showed the graduated charges for power therein provided. The schedules provided for a quantity discount which the witness testified would, in his opinion, have some effect on the amount of electricity used for pumping purposes and the amount of water pumped. The computations of the witness show that the pumping of large quantities of water reduces materially the cost per acre foot pumped. (Wash. Abs. 149, 150, 151, 152).

CARL A. LARSON was called as a witness by the State of Washington (R. 896 to 912, 1174 to 1177, Wash. Abs. 154). Dr. Larson was at the time of the trial of this action with the U. S. Department of Agriculture, holding the position as agent cooperating with the Irrigation Branch Employ-

ment Station at Prosser, Washington. The witness accompanied Mr. F. S. Youngs in connection with the soil survey evidenced by the Youngs Soil Map (Wash. Ex. 15). With the Youngs Soil Map as a guide the witness made examination of the various types of soil in the area covered by the map and went to the farms and secured from the farmers information as to irrigation practice and methods. (Wash. Abs. 158). These visits were made during the fall of the year and in the main after the irrigation season. Soil samples were taken and analyzed for the purpose of determining the water holding capacity of the soil. The witness expressed the opinion that some of the irrigation furrows were entirely too long for economical irrigation, and that the water was required to run in them as much as sixty hours continuously to get to the end of the runs. There were few irrigation structures; the lands are usually irrigated out of earthen ditches without structural turnouts. There was more flume encountered in the Gardena project than elsewhere. Water saving appliances were not found in a general way in the valley. The farm products were diversified. The witness expressed the opinion that for the purpose of determining water requirements, the soils portrayed on the Youngs map should be divided into two groups: First, 1, 1-R, 1-D, 1-RA, 4, 5 and 2-A; second, 2-B and 3. The witness expressed the opinion that the first class of lands required 4.8 acre feet per irrigation season or a constant flow basis of ½ miner's inch per acre. The water requirement on the second class the witness fixed at a constant flow of one miner's inch per acre over a season of 6½ months. This amount was fixed for the purpose of taking care of the peak months and the amount of water allowed is sufficient for the period of greatest demand.

In arriving at his conclusion the witness did not con-

sider any of the use records for the particular pieces of land. With certain limitations the use which has been made of water is the important factor in determining the duty. Whether the duty of water should be fixed at an amount somewhere near what the farmers use in actual practice depends upon what you term reasonable efficiency in applying the water. In setting the duty of water you cannot disregard either the maximum production per unit of water or the minimum production per unit of land. Where a farm is being operated on a large amount of water, which gives to the farmer a maximum production of crop per acre, but the average production per acre foot of water used is low, the witness stated that he would want to know how the farmer was irrigating before suggesting a reduction in the amount of water used. (Wash. Abs. 162). In fixing the duty of water the witness testified that the expense which the irrigator has gone to is a matter for consideration. If the irrigator has used every efficient method possible and then has insufficient water, if he has gone to expense of putting in a pumping plant, it would be powerful evidence that his gravity supply was too small.

The witness admitted upon cross-examination that he had not carried on any irrigation work upon lands of the same character as the No. 3 soil in the Milton-Freewater area; that in his experience he knew of no soils just like it. (Wash. Ab. 165).

WILLIAM W. JOHNSTON, a witness for the State of Washington, testified (R. 938-988, Wash. Abs. 172-205): That he is a Reclamation Economist with the U. S. Bureau of Reclamation, Department of Interior. His duties under the Department are chiefly with the agricultural phases of the work of the Bureau, including classification of lands,

investigation of water duty, economic problems connected with the repayment of water charges and the ability of land to repay such charges. He has been with the Department in that position for eight years. He has a B. S. degree in Agriculture from the Oregon State Agricultural College. He was Field Agent of the U. S. Department of Agriculture engaged in duty of water experiments for about four months in 1917. He was a member of the faculty of the Oregon State Agricultural College from 1919 to 1925, engaged largely in soil and investigation work. His investigation locally has been for the purpose of familarizing himself with soil and agricultural conditions, with a view of determining the water requirements, largely on the basis of comparison with use in projects where he has made other investigations. He made an examination of the soils here and attempted to acquaint himself with the irrigation practices. He spot-checked the soil map (Wash. Ex. 15) in the field in certain places. He gave as his opinion that the soil classification shown on the Youngs map should be grouped as was done by the witness Larson. For the purpose of his testimony he referred to the gravel group as Group B and the balance as Group A. For Group A, he recommended a diversion duty of ½ miner's inch per acre—which, with an estimated loss in transit of fifteen per cent, would make at the land a duty for the peak month of .63 acre feet. On a constant flow basis this would give for a 6½ months irrigation season 4.81 acre feet per acre. For Group B he would allow a diversion of .9 miner's inch per acre or 1.34 acre feet as a diversion duty in the peak month, which, with a transportation loss allowance of twenty-five per cent, would give a net duty at the land of 1 acre foot per month, or 8½ acre feet per acre gross duty on a 6½ months irrigation season. The principal basis of this determination was the study made

by the witness in the Sunnyside Valley in 1930 and 1931, which study he adapted to the conditions here under consideration. He was familiar with practically all of the projects under the reclamation service. The investigation of the Sunnyside division was a determination of duty on what are known as the supplemental contract lands with an area of approximately 36,000 acres. The Sunnyside project was selected as having application here because the conditions were more nearly similar in climate, in method of delivering water; that is, they used small irrigation heads, and a large part of the soils were comparable. In the Sunnyside division there was first made a careful classification of the lands on the basis of water requirement. Test holes were put down on an average of one for every ten-acre tract. Each of the various ownerships was examined, notes were made as to the length of runs and furrows, the apparent care with which the land owner handled his water, crop appearance, whether or not there was indication of excessive use of water, and the acreage in different crops. There was then compiled a record of water use for these tracts over a period of eight years, which was considered representative. The land was then divided into five classes and a summary made as to the water actually delivered to each tract of land each year over the eight-year period. This was the basis of the recommended duties.

The first matter in making a comparison of what is found here in the Walla Walla valley with the Yakima (Sunnyside) project was to see whether the climatic conditions were sufficiently similar to warrant using the data. The normal rainfall in Walla Walla is 17.01 inches per season, in Milton it is 14.41, in Sunnyside it is 6.48. The rainfall in Sunnyside is appreciably less than in Walla Walla and Milton. From the standpoint of precipitation the Oregon area has some ad-

vantages over Sunnyside. The elevations above sea level are, Walla Walla 991 feet, Sunnyside 740 feet, Milton 1100 feet. The annual mean temperature at Walla Walla is 54.5 , Sunnyside 51.5°, Milton 53.4°; the maximum in each case being 104°. The number of rainy days, in Walla Walla is 114, Sunnyside 69 and Milton 82; clear days, Sunnyside 212, Walla Walla 115, Milton 128; the number of cloudy days is greater at Walla Walla and Milton than at Sunnyside. Any higher water requirement in the Walla Walla country brought about by the higher mean temperature would be balanced by the greater precipitation and the larger number of rainy and dark days. It is not claimed that the small amount of rainfall in the summer has an appreciable effect, but the lower transpiration and lower evaporation during rainy periods has a marked influence on irrigation requirement. The climate would indicate a lower water requirement here than at Sunnyside. The witness then proceeded (Wash. Abs. 179) to give a detailed statement of the soil classifications which he made at Sunnyside and the amount of water which was allotted to each of these classes of soil. Where there was a use of water on the Sunnyside project in excess of the allowances made by the witness, it was explained as due to causes other than the water requirement of the soil. The witness stated, (Wash. Abs. 184) that since he had been in this area only a short time he had to arrive at his conclusions regarding irrigation practice as to the No. 3 type soil largely from examining the farm irrigation systems. The irrigation practices in this locality are far behind the general agricultural practices. On very intensively cultivated small farms, you find the condition of irrigation furrows, conditions of head ditches, the method used in making furrows, of a type that you would expect where the farming was very extensive. There is one flume about one

hundred yards long near Milton, which was the only flume of that type. There were no turning-out devices from the laterals to the land for saving water. There was very little irrigation going on in the territory—about three places where he saw water being used. The irrigation runs appeared to be quite long—that is, the length of the furrow from the real head ditch until there is another head ditch. As to the practice of putting in pick-up ditches at intervening points between the place where the water is turned on the land and the lower end of the land, the more efficient practice would be to have a second head ditch so that when you were irrigating your second run of furrows, you can have the water in a single ditch. It is not good irrigation practice to have 18 to 20 rills running down to a pick-up ditch and a second line of rills approximately the same length from the pick-up ditch to the lower end of the tract on soil such as No. 3 in the Milton-Freewater territory. Short runs are to prevent over-percolation of water in the upper area of irrigation. The length of run in the vast majority of cases in the Yakima valley is 320 feet. The best practice is to clean out the ditches as soon as possible after irrigation until such time as the crop gets up to where it will shade the ground and where cultivation would break down the plants.

There is no peculiar physical condition in connection with Class 3 soil in the Milton-Freewater territory which would make the distribution of water on that land particularly difficult. The soil apparently subs quite easily. A few farmers state that it is possible to get the water through a run of 20 rods in two hours without washing. That would indicate that they can spread the water rapidly in the surface soil without much deep percolation. The allowance for the soils included within Group B is comparatively liberal when you consider the nature of agriculture. The

allowance given by me takes care of the peak requirement. It is necessary between June 15th and August 15th to have a fairly large supply of water. The allowances made are sufficient for that period. The allowance for transportation loss is liberal. Considerable improvement could be made in the reduction of transportation losses without great expense. It would be expensive to line the ditches to stop all losses, but the ditches are undercut and frequently have excessive fall and weeds have grown up along the edges. The improvements to be made depend on the intensity of the agriculture. In areas where they have large farms and per acre crop returns are low they ordinarily do not go to much expense to fix up their ditches. In areas where water is valuable and agriculture is intensive, it is customary to put in flumes. There are many things that can be done which are not expensive to save water, which could be applied. The witness stated that the use of more water than he indicated here would be more harmful than beneficial. In the shallow soils the loss in fertility from excessive irrigation is an important factor. The amount recommended is all that could be beneficially used.

The witness stated that he had the opportunity to observe considerable irrigation of stony, gravelly soil, and though he had not himself handled water on it he had conducted duty of water experiments on the kind of soil which exists around Milton. There are some small areas around Sunnyside of stony and gravelly soil, but they are not large enough to make a separate classification for them.

Dr. Powers (a witness in this case) was brought in for a few days to review the work of the witness on the Sunnyside project and to advise with him. A prior soil classification in Sunnyside was based upon a study made by Harding, a witness in this case for the State of Oregon.

The witness started his investigations of this district March 30, 1934. (Note: The witness testified April 4, 1934.) Long years of farming are necessary for the best demonstration of what amount of water is actually needed. Farmers, unless they have farmed with a limited water supply ordinarily will not adapt themselves to good irrigation methods. (Wash. Abs. 193.) The fact that a farmer is spending money for pumping water would not necessarily be proof that the total amount of water otherwise available is inadequate. A man might do that for the purpose of making a larger irrigation head instead of rotating. The expenditure of money would be a general indication of want of water. If after years of farming and experimenting with longer and shorter runs the farmers had generally used a 20-rod run, that would not be considered what would be best in those conditions if they were operating with an unlimited water supply. The witness stated that he had not been over the lands here involved during irrigation season when everyone was irrigating. All he had seen was the preparation for irrigation which was observable during the last few days. No soil tests were made other than soil examination of profile for comparative purposes. There was no determination of the soil content and water holding capacity. No laboratory tests were made. The limiting factor on the soil here is the water holding capacity, but the limiting factor on the soil at Yakima is the amount of deep percolation that is necessary in order to cover it. The latter would be of more importance in fixing the duty of water than the limited water-holding capacity of the soil. In and around Milton it would probably not be economical for the farmers there to line or flume their ditches to any extent under present conditions, with the exception of the real small, very intensively cultivated ranches. It would pay as to those to

have some sort of flume regardless of water supply. It is a general thing over the northwest in the irrigation projects for the amount of production of alfalfa to be reduced after the virgin fertility of the soil has been used. In the Yakima district orchards would be irrigated not oftener than once in two weeks, for alfalfa there would be only three or four irrigations per season, potatoes usually once a week. The fact that alfalfa is irrigated only three or four times a year would indicate a large water holding capacity in the soil. In the orchard tracts they would generally apply about six acre inches per irrigation, somewhat less on Class 4 and considerably more on Class 5. On Class 5 you necessarily lose an enormous amount of water in deep percolation. Around Milton light irrigation could be applied successfully. There would not be a big percentage of loss through deep percolation if they ran the water for a period of about three or four hours along the furrows. Many of the furrows used in the orchards have been too deep. The ditches should be kept free from weeds, not more than three or four furrows between the three rows, checks should be put in to control the grade, then there should be controlling devices. The irrigation then should proceed at a rate which would get the water down to the end of the row in a comparatively short time, if possible two hours. The witness was not familiar enough with the soil to state just what the length of time for irrigation should be, but he stated that it ought to be short enough that there would be practically no waste at the lower end. The irrigation should be completed within three or four hours; longer periods would result in excess percolation. The experience and judgment acquired by reason of long farming needs to be considered in fixing the number of applications of water. The judgment of the man upon the ground should not necessarily be relied upon.

Like areas should be compared to determine the amount of water requirement. Farmers here have stated they can run the water through on Class 3 soils for two or three hundred feet in three hours and with a large head in a shorter time. No. 3 soil in the Milton-Freewater area does not have any unusual soil percolation problems. It is undoubtedly possible by keeping the water on a long time to lose an enormous amount through deep percolation because there is nothing below to stop it. In ordinary irrigation practice it can be irrigated with very little percolation loss.

Dr. Powers, a witness for Oregon, is familiar with the Sunnyside project used by Johnston as the basis of comparison in his duty of water determinations. Powers testified that the soils in the Oregon area would certainly use more water than those of the Sunnyside project (Or. Abs. 102.)

Evidence as to Ground Water and Use of Wells in Oregon.

ARTHUR M. PIPER

Mr. Piper is a geologist employed by the U. S. Geological survey as a specialist in the study of ground water. Since 1926, he has been engaged largely in the study of underground water problems on behalf of the Government in the States of Pennsylvania, New Mexico, Tennessee, Oregon, Washington and California. In cooperation with the U. S. Geological Survey, Oregon Agricultural Experiment Station of Umatilla County and the Washington Department of Conservation and Development he made an investigation and study of the underground water conditions in the Walla Walla River basin. For seven years the witness was with the Idaho Bureau of Mines and Geology, spending during that period from half to two-thirds of his time upon under-

ground water problems. Oregon Exhibit No. 16 is the report of the witness upon his underground investigation of conditions involved in this action. The substance of Piper's testimony follows (Wash. Ab. 223, R. 761-804):

A bedrock underlies the basin and is the base upon which the valley is built. The outcrops extend entirely along the north, closing around the west, except a very narrow gap through which the stream escapes. It extends continuosuly along the south, but lying slightly to the east; in places the bedrock almost comes to the surface. It is folded in the form of a canoe-shaped basin, the deepest part of which is between Touchet and Lowden about on the the state line and there the dense bedrock is first reached somewhat below sea level and several hundred feet below the land's surface. From this point the bedrock rises in all directions. Within the depression of the bedrock there are various deposits laid down by streams, which make up the valley. The oldest of those stream-laid deposits is the Gardena terrace. In the vicinity of Gardena the terrace is approximately 120 feet above the flood plane of the Walla Walla River. (Wash. Ex. 17.) To the eastward the height of the terrace decreases until opposite Milton it is perhaps 40 feet. Still further east and northward toward Walla Walla and east of Walla Walla and around Milton it comes down nearly to the level of the flood plane. Initially this terrace covered the entire basin. It comprises two fans in form, with the center about the present canyon of the Walla Walla River at Milton and Freewater. Another one has its head near the village of Tracy. These two fans declining to the westward merge together in a rather flat, smooth plane. The two fans join about where the Yellowhawk flows in to the Walla Walla River. Portions of the plane that are exposed are composed of relatively fine stratified material. This material is well exposed near

the head box of the siphon crossing Pine Creek on the Burlingame (Gardena) ditch. The material is relatively fine, rather tight and would not transmit water rapidly. After the formation of the Gardena plane the streams have cut into it and formed the channels through which they now flow. In the vicinity of Milton and Freewater and around the City of Walla Walla the streams have almost completely cut away the top of the old terrace. Later they began to deposit gravel in the valleys which they had previously cut out. That process has resulted in two formations, one termed the "low terrace," designated upon the report (Or. Ex. 16) in brownish yellow. Those terraces extend but little above the flood plane, commonly not more than five or ten feet and nowhere more than twenty. They are formed of fine material, relatively water tight. The other, the youngest formation in the basin, is the coarse gravel, forming the fans at the mouth of the canyons of the Walla Walla River and of Mill Creek, one extending outward as a tongue or finger along each of the streams, much like the pattern of one's hand and separated in places by the remnants of the high terrace. As these fans extend they become progressively finer, as is the normal condition of a deposition by streams. The records of a number of drilled wells given in the report show the total thickness of the material resting on bedrock as approximately 350 to 550 feet. The widest opening of the gravel fan that goes north from Milton and Freewater is near the eastern side of the fan, now occupied by the Little Walla Walla River.

In developing the study of ground waters the method recognized by the Geological Survey was used. A reasonable number of representative wells were selected and in those wells periodic measurements were made to determine the static level of the ground water and from those measurements

the fluctuations of that level were traced. The purpose was to relate those fluctuations to the source and disposal of the ground water. The grade or slope of the surface of the country are only incidentally considered. The measurements are reduced to height above sea level and the form, not of the land surface, but of the water table is dealt with. Around Milton and Freewater and north therefrom the grade of the land surface is approximately 80 feet to the mile, being steeper close to Milton and becoming gradually flatter as one goes outward. Wells were selected which are representative of the natural range in conditions, using both deep and shallow wells for observation. The observation wells were selected to cover the entire district northward of Mill Creek, as designated upon Oregon Exhibit 16, Plat No. 5. Plat No. 5 shows the form of the water table at two periods, one approximately June 20, 1933, and the other approximately August 29, 1933. The first period is that when the wells stood at their highest level for the season and the later period, August 29th, when they were at about their lowest point for the season. The lines upon the plat are drawn to represent 50-foot levels, one line, solid, showing the contour at the June 20th period, and a broken line showing the contour at the August period. The lines are so drawn as to divide areas in which the water table has fallen or risen in equal amount. Colors are used on the plat to show areas on equal rise and fall. The absence of color indicates that the table fell less than five feet during the period. The areas shaded in the lightest pink tone indicate that the fall of the water was between five and ten feet. The next darker shading indicates a fall between 10 and 15 feet, and the darkest shading a fall of more than 25 feet. The blue shading shows where the water level rose. In none of these was the rise as much as 5 feet. The water in the gravel

would move or percolate exactly as though it were surface water flowing down hill and at right angles to the contour lines. Where the gravel is of even texture the rate of movement is proportionate to the grade, or inversely proportional to the spacing between the contours. The June 20th contours represent a period when the high water is flowing down the Tum-a-lum River in Oregon so that there is water flowing on the surface of the stream bed through its entire length. At that time the contours of the Milton-Freewater fan are roughly circular, apexing near Milton. The water table rose both from the east and the west in that district and was highest at the Tum-a-lum fork. The observation of wells which were measured frequently near the river indicates that they rose and fell in a pattern entirely similar to the rise and fall of the stream. The water which would seep away from the river and become ground water high on the fan could percolate rapidly outward directly down the slope over practically the entire width of the fan in a conical form. Water which left the river high on the fan in the vicinity of Milton and Freewater, if it percolated rapidly outward, would pass along the westmost edge of the fan, some of it nearly northward. If some of the water left the stream bed of the Tum-a-lum at a point approximately half way between the Nursery Bridge and the McCoy Bridge it would be more constrained as to the area within which it could percolate. It would be bounded by radii drawn from the SW¼ of the NW¼ of Section 14 and would extend westward nearly to the west fork of the Little Walla Walla River. Seepage water entering the formation near the Nursery Bridge would supply water roughly for the west Little Walla Walla. 115 wells were used in the observation; they would be representative of the 300 wells within the district. The area where the wells are operated

shows the greatest fluctuations of the water table for the August 29th measurements; but it shows a change of grade but no departure from the general conical shape that existed before the decline. It cannot be assumed that the variation is caused by pumping. In the higher part of the fan about Milton and Freewater and extending northward and westward to about the 800-foot contour line on plat 5 of Oregon Exhibit 16, several of the observation wells close to the river have fluctuated as much as 28 feet. They would be represented by a well in the deep pink spot. If the fluctuations were caused entirely or largely by pumping, the recovery should largely wipe out that decline after pumping stops. It does not. Another thing, it is not the time of the year when those wells stand at their lowest. A few key observation wells were selected in the winter of 1932, in December, on which were installed float gauges so that the owner could read them readily. There are a number of other readings, taken every day or two to every week or ten days in December, 1932. In several of those the lowest point of the water table is not late in August, not late in the period of pumping as is represented here, but in the preceding February and March, when there was little irrigation and no pumping. From that low period in February and March the wells began to rise and they rose after the freshets came down the river. The wells nearest the river rose to their highest point not long after the freshet was at its highest. They began to drop before pumping started. In considerable part, the ground water supply is similar to the surface water supply and comes down in a current or freshet, rising and falling with the high water and low water seasons of the year. It is rather a wave. Observations have shown that the water table rises in some wells in response to the river and in response to the irrigation

nearby; that is, the spreading of water over crop land near the well, and in response to rainfall. The water table falls after pumping becomes general or as the river declines. The natural regimen of the basin is such that more than one of the agencies causing the water table to fluctuate will be active at the same time. It is impossible to say what fraction of the total rise is due to the river and what to irrigation. Conversely the pumps are turned on as the supply of water for surface irrigation declines, which is also as the river declines, so that the depression of the water table due to pumping in 1933 began soon after the water table had begun to decline because the freshets had passed down the river. The data do not justify an estimate of the portion of the total fluctuations due to the several causes. The greater part of the fluctuation is related to changes in discharge of the river. The depressions in the water table as shown north and northwest of Freewater do not destroy the general conical form of the water table or greatly disturb the general direction of percolation. There is a slight indication, not strong, which represents conditions of one year only, that in the eastern edge of the fan there was relatively more steepening than in the western part of the fan. There is a suggestion from the evidence that this would tend to divert more water to the east side of the fan and relatively more water to flow northward than to the westward. Along the higher part of the fan the percolation of the ground water is unrestricted by the remnants of the Gardena terrace, but as we pass outward, the alluvial gravel separates into these several fingers which pass between and rest on a floor of the material forming the Gardena terrace. In other words the gravel which relatively is highly permeable is breaking up into tongues which are separated by relatively impermeable ma-

terial. Those tongues rest on a floor of some more impermeable material which from below is constricting the thickness of the young gravel. The net effect is to reduce greatly the area of cross-section in that gravel through which the ground water can move freely, that is, about three miles northward and westward from Milton along the eastern tips of the Gardena terrace. There is perhaps about four miles of width in that gravel through which the ground water can percolate. A mile further out that width is reduced, perhaps half, the greatest constriction being toward the west. Just at Milton and Freewater the contours indicate a dispersion of water away from the stream. The eighth contour and the lower contours have a similar form in that they trend somewhat west of north to the north of the Walla Walla River, but after they cross the river swerve sharply toward the west and southwest. If water is moving down the slopes it converges toward the river both from the north and from the south along both sides of the V-shaped valley. From the 950 contour to the 800 contour it would indicate a losing stream. From the 800-foot contour the water table slopes toward the stream from both sides so the water moving inward to the river would tend to make a gain. On Exhibit 16 we list the springs and classify them in three zones—the so-called inner zone, which contains most of the springs and which is roughly between the 800-foot and the 850-foot contours, as shown on Plat 5, Oregon Exhibit 16; beyond that is the intermediate zone between the 700 and 750-foot contours in which there are fewer springs; and the outer zone which is between the 600 and 650-foot contour. Most of the springs are in the higher zone. This indicates that the surface grade is such as to overtake the water grade. The first row of springs is within a zone beginning about where the McCoy Bridge is located on the

Tum-a-lum River. The application of irrigation water is rather general over the whole fan. The data do not permit saying what portion of the total fluctuations of the water table is due to irrigation, although some of it undoubtedly is. It has not been possible from the data available to show that the form of the water table in any major feature is the result of irrigation or is the result of pumping. The general pattern of ground water circulation is a natural one, modified somewhat, perhaps, by irrigation water and by pumping, but not to a major extent. (Or. Abs. 74, 75.)

The sources of water supply here are just the drainage area in the Walla Walla valley. The springs that break out in the area beginning about three miles north of Freewater and extending on down to the state line and along the Walla Walla River are supplied by ground water. The lower Tum-a-lum or Walla Walla River is, when the channel is dry above, analogous to a spring. The ultimate source of the stream flow of the branches from the springs to the north of Freewater and in the Walla Walla River in the vicinity of the interstate line is the water from the drainage of the north and south forks and the small tributaries of the Walla Walla River.

The evidence shows without contradiction that the water pumped from the wells is used exclusively upon the tract of land on which the well is located. If the Washington contention that the water pumped is, in part at least, water diverted from the river and applied to the lands and lost in deep percolation, then the user of the land would have the right to recapture the water and beneficially reuse it.

This court in the case of *Ide* v. *United States*, 263 U. S. 497, 506, quotes with approval the language of Judge Dietrich in United States v. Haga, 276 Fed. 41, 43, as follows:

> "One who, by the expenditure of money and labor, diverts appropriable water from a stream, and thus makes it available for fruitful purposes, is entitled to its exclusive control so long as he is able and willing to apply it to beneficial uses, and such right extends to what is commonly known as wastage from surface run-off and deep percolation, necessarily incident to practical irrigation. Considerations of both public policy and natural justice strongly support such a rule. Nor is it essential to his control that the appropriator maintain continuous actual possession of such water. So long as he does not abandon it or forfeit it by failure to use, he may assert his rights. It is not necessary that he confine it upon his own land or convey it in an artificial conduit. It is requisite, of course, that he be able to identify it; but, subject to that limitation, he may conduct it through natural channels and may even commingle it or suffer it to commingle with other waters. In short, the rights of an appropriator in these respects are not affected by the fact that the water has once been used."

SUMMARY OF FINDINGS OF FACTS

From the foregoing facts I find as follows:

1. The Walla Walla River is a non-navigable interstate stream flowing through both the States of Washington and Oregon.

2. The waters of the Walla Walla River and all of its tributaries are usable and at the time of the commencement of this suit were used during the irrigation season for irrigation purposes in either the State of Washington or the State of Oregon.

3. The irrigators within the two states claim the right to the use of waters of the Walla Walla River and its tributaries under the law of appropriation and not as riparian owners.

4. Mill Creek arises in Oregon, enters Washington, and follows for a distance of twenty miles in Washington before it joins the main stream of the Walla Walla River. All of the waters of Mill Creek and its tributaries at the time of the bringing of this action had long been appropriated and used for agricultural, municipal and domestic purposes within the State of Washington.

5. The North and South forks of the Walla Walla River rise in Oregon, have their juncture in Oregon and thereafter flow northward as the Walla Walla River for a distance of about five miles to a point about five miles south of the Washington-Oregon state line, where the river divides into the Little Walla Walla and the Tum-a-lum Rivers (Wash. Ex. 17). When the Tum-a-lum River enters Washington it is thereafter called the Walla Walla River. Irrigators in Oregon have, during the irrigation season, for more than fifty years prior to the beginning of this action diverted all of the waters of the Walla Walla River in Oregon away from the channel of the Tum-a-lum River, and used the same for agricultural, power, municipal and domestic purposes.

6. The aridity of the climate is such in much of the Walla Walla River area that irrigation is necessary to agriculture. Where water is available the soil produces abundantly.

7. As a result of the use of the waters of the Walla Walla River and its tributaries, and dependent upon such use, there have been developed in each state farms, cities

and industries. Such development has been a natural, normal development and in no way affected by state lines.

8. In addition to the surface water available for use within the State of Oregon, the farmers have tapped the subsurface water supply by sinking about three hundred wells, from which wells they pump each year approximately 9000 acre feet of water. The water so pumped is used upon the lands where the several wells are located.

There is no satisfactory proof that the use of the water from these wells materially lessens the quantity of water available for use within the State of Washington.

9. In each state separate adjudications have been had fixing the rights of the parties to said suits to the use of the waters of the river. Such adjudications fix the priorities as between the parties and limit the amount of use. Washington users are not parties to the Oregon adjudications and Oregon users are not parties to the Washington adjudications. The uses in each state are established uses and do not involve new irrigation projects.

10. At the margin of the alluvial fan formed at the mouth of the canyon down which the Walla Walla River flows is an area which produces small streams having their source in springs. These springs come from the underground water produced by winter snows, and from irrigation of the higher lands on the fan. The waters from these small spring branches have, for a very long period, been used, where available, for the irrigation of Oregon lands.

11. The allegation of the complaint that the use of the waters of the Walla Walla River in Oregon moves the underground water supply so far to the west that it does not return to the river at such point as to be usable within the

State of Washington is not sustained by the evidence. On the contrary, the evidence tends to show that the use of water for irrigation within the State of Oregon is beneficial to irrigators within the State of Washington.

12. In 1891 and 1892 the predecessors in interest of the Gardena Farms District filed their notices of intention to appropriate water from the Walla Walla River. For many years prior to the posting of such notices the irrigators within the State of Oregon had been using, during the irrigation season, all of the waters of the Walla Walla River arising above the Red Bridge.

The Gardena right is the largest diversion from the Walla Walla River in Washington.

Under the Gardena filings, canals and other diversion and transportation facilities were constructed at a cost of $227,000.00. In 1927 the Superior Court of Walla Walla County, Washington, decreed to the Gardena Farms District the qualified right to the use of sufficient water, as fixed in the decree, to irrigate 5000 acres of land and the further right to perfect the appropriation of sufficient additional water to irrigate 2000 acres of land. This right, except as to certain specified subsequent rights, was given a priority of 1892. In addition to the above right the Gardena Farms District was given the right to the use of fifty c. f. s. of water for winter irrigation. Winter irrigation is resorted to for the purpose of supplementing inadequate summer irrigation rights.

From the beginning the Gardena project had an inadequate supply of water for the summer irrigation of the lands lying under its canal. To overcome this water shortage the owners of this right had spent large sums of money to develop wells and reservoir sites, to use the sewage water

from the city of Walla Walla, and, as to a part of the lands, had resorted to winter irrigation. The entire development of the Gardena project had been without the use, during the irrigation season, of any waters of the Walla Walla River arising above the Red Bridge. Where there is water in Oregon in excess of the requirements of the Oregon users, there is normally an excess in Washington over the amount necessary to supply rights with priorities senior to the Gardena right. There is no satisfactory proof that to turn down water past the Red Bridge in Oregon during the period of water shortage would be materially more advantageous to Washington users than to permit such water to be applied to surface irrigation in Oregon. The channel of the Tum-a-lum River between the Nursery Bridge and the McCoy Bridge is an extremely wasteful channel. Water turned past the Red Bridge sinks and becomes part of the underground waters. A substantial part of the water applied to irrigation in Oregon likewise goes into the underground water supply.

During the period from 1892 to 1930 the Gardena users did not have the use of any water of the Walla Walla River during the irrigation season arising above the Red Bridge. They did nothing to indicate a claim to any of such water. On the other hand, with knowledge of the fact, they permitted the Oregon users to develop their communities in reliance upon the right to the use of the water.

To limit the long established use in Oregon would materially injure Oregon users without a compensating benefit to Washington users.

13. The use of water by the Irrigators within the State of Oregon is not unduly wasteful but is, under the circumstances, a reasonable, beneficial and necessary use.

14. The users within the State of Oregon have not diverted or used water in excess of their necessities or in excess of the amounts decreed to them under the Oregon decrees.

15. The present use of the waters of the Walla Walla River in the two states has grown up normally as the economical division and distribution of such water on lands upon which the water can be most advantageously used and is, as between the two states, an equitable division and distribution of the waters of the Walla Walla River.

LEGAL CONCLUSIONS

From the foregoing facts I make the following Conclusions of Law:

1. This court has jurisdiction of this controversy as a controversy between two states to determine the rights of the parties to the use of the waters of an interstate stream.

2. The Gardena Farms District is not entitled to the use, during the irrigation season, of any of the water of the Walla Walla River arising above the Red Bridge, because:

(a) Since 1880 all of the waters of the Walla Walla River arising above the Red Bridge have been diverted and used within the State of Oregon with the knowledge and without protest until 1930 upon the part of Washington users.

(b) None of the waters of the Walla Walla River arising above the Red Bridge have ever been put to a beneficial use during the irrigation season under the Gardena filing.

(c) If the predecessors in interest of the Gardena Farms District ever had any intention to ap-

propriate water of the Walla Walla River arising above the Red Bridge such intention was abandoned before the commencement of this action.

(d) Over a period of nearly forty years the Gardena Farms District have recognized the right of Oregon appropriators to the use during the irrigation season, of all of the waters of the Walla Walla River arising above the Red Bridge.

3. The State of Oregon and its appropriators are not diverting and using more of the waters of the Walla Walla River than their equitable proportion thereof.

RECOMMENDATIONS FOR A DECREE

I recommend that a decree be entered dismissing complainant's bill of complaint.

Respectfully submitted,

WILLIAM W. RAY,
Special Master.

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CHARLES ELMORE CROPLEY
CLERK

IN THE

SUPREME COURT

OF THE

UNITED STATES

IN EQUITY

No. 11 Original

OCTOBER TERM, 1935

THE STATE OF WASHINGTON,
Complainant.

v.

THE STATE OF OREGON, *Defendant.*

MOTION FOR LEAVE TO FILE COMPLAINANT'S EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

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State of Washington.

The State of Washington, by its Attorney General appearing in that behalf and with the authority, consent and direction of the Governor of said state, comes now here and presents this its motion for leave to file in this Court and cause its exceptions to the report of the Special Master, which said exceptions, it is proposed, will be argued orally, as heretofore authorized by order of this Court.

A true copy of said exceptions is hereto attached.

STATE OF WASHINGTON, *Complainant,*

By G. W. HAMILTON,
Its Attorney General,

GEO. G. HANNAN,
Assistant Attorney General,

FRED J. CUNNINGHAM,
Special Counsel,

Counsel for Complainant,
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